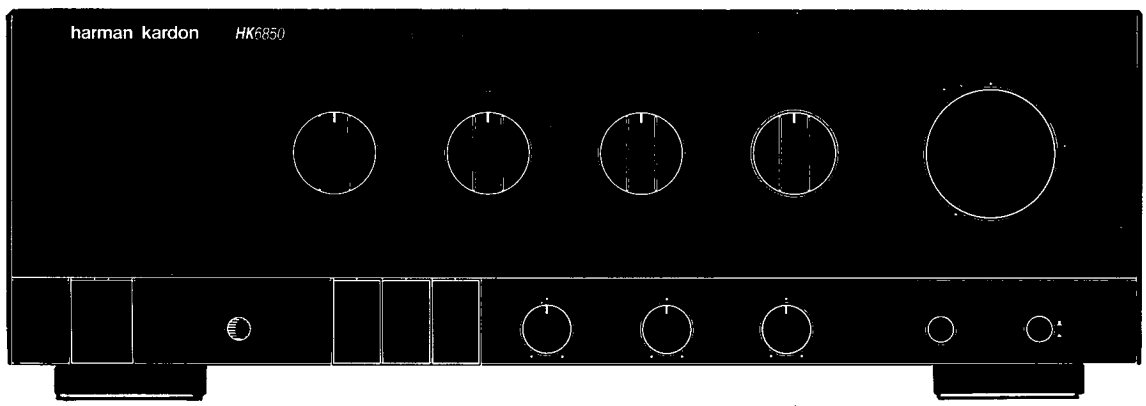
The Harman Kardon Model HK6850

Manual 184A

INTEGRATED AMPLIFIER

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- (G) : **German model**
- (GB) : **German model Black version**
- (IB) : **International model Black version**

HK6850

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harman/kardon

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SPECIFICATIONS

	Nominal	Limit
Continuous Average Power (FTC)		
20Hz—20kHz, both channels driven		
8Ω, 0.08% RMS	97W	≧ 85W
4Ω, 0.1% RMS	159W	≧ 120W
High instantaneous Current Capability (HCC)	80A	≧ 60A
Half Power Bandwidth	<10Hz~>100kHz	<10Hz~70kHz
Frequency Response (at −3dB down)	<1Hz ~ >110kHz	
Square Wave Rise Time	2μsec	≦ 2.5μsec
Input Sensitivity (at 85W output)		
CD	135mV	± 25mV
Phono (MM)	2.2mV	± 0.3mV
Phono (MC)	130μV	± 20μV
Signal to Noise Ratio		
CD	78dB	≧ 70dB
Phono (MM)	77.6dB	≧ 75dB
Phono (MC)	74dB	≧ 67dB
Channel Separation (at 10kHz)		
CD	46dB	≧ 40dB
Phono (MM)	48.2dB	≧ 40dB
Phono (MC)	49.6dB	≧ 40dB
IM Distortion Ratio	0.039%	≦ 0.1%
Damping Factor at 1kHz	100	≧ 70

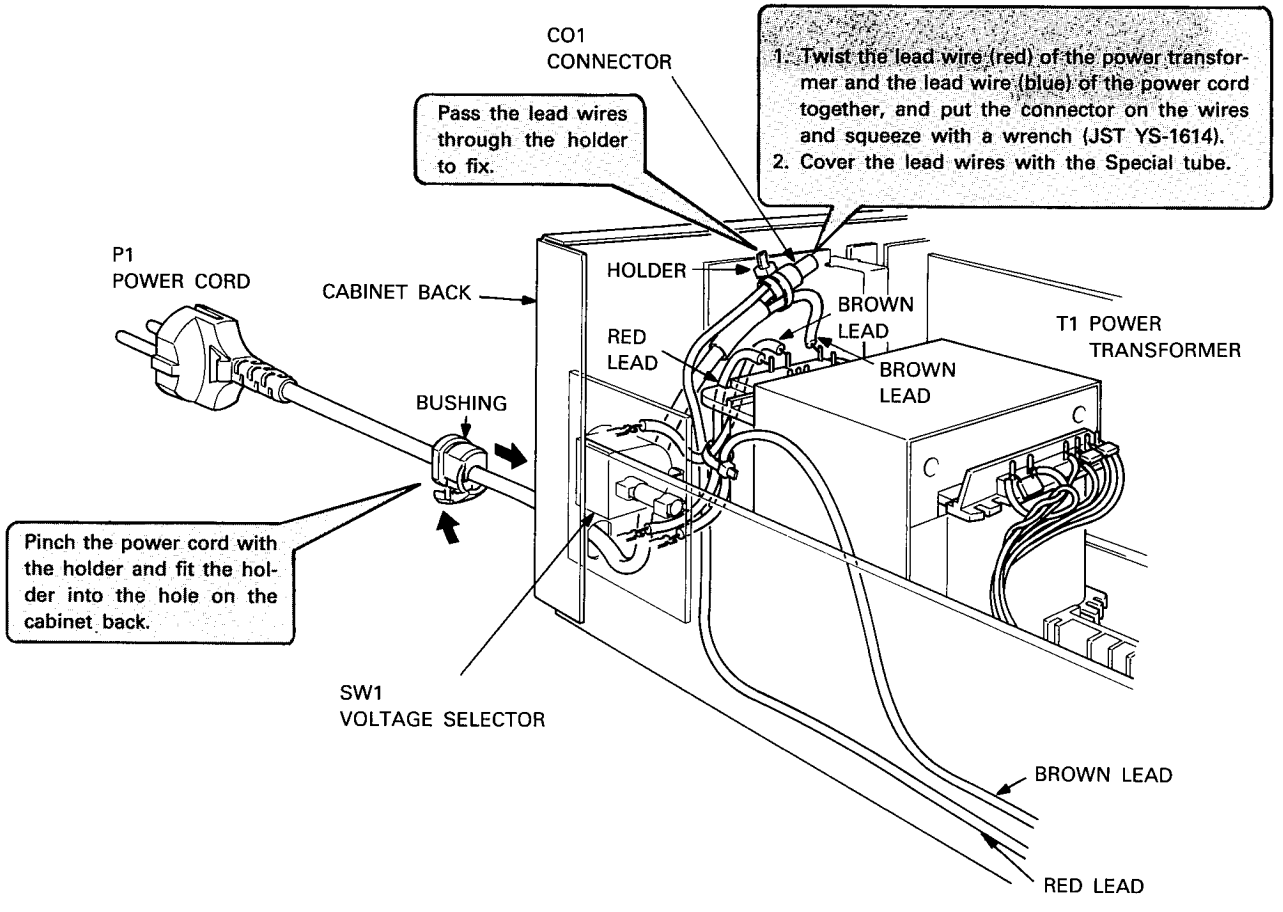
	Nominal	Limit
Tone Control Characteristics		
Bass (at 50Hz)		
Boost	10dB	± 2dB
Cut	10dB	± 2dB
Treble (at 10kHz)		
Boost	10dB	± 2dB
Cut	10dB	± 2dB
Filters		
Subsonic	15Hz, 3dB	± 1dB/Octave
Phase Correct Loudness at 50Hz	6dB	± 2dB
DC Output Voltage		
L channel	0mV	± 60mV
R channel	0mV	± 60mV
RIAA Equalization at Tape Out (20Hz/20kHz) (10kΩ load)	0.2dB	±0.5dB
Phono Over load (No load)		
Phono (MM)	168mV	≧ 120mV
Phono (MC)	8.5mV	≧ 5mV
Dimensions (W x H x D)	17-3/8" x 6-5/16" x 15-15/16" (443 x 160 x 405mm)	
Weight	34lbs. 3oz. (15.5kg)	
Power Supply	AC 230/240V, 50/60Hz	
Power Consumption	280W	

These specifications are service target specs.

Specifications and components subject to change without notice.
Overall performance will be maintained or improved.

POWER CORD REPLACEMENT

In order to prevent fire or shock hazard when replacing the power cord, follow the procedure below to replace the parts with the standard supply parts.


CO1
CONNECTOR
1. Twist the lead wire (red) of the power transformer and the lead wire (blue) of the power cord together, and put the connector on the wires and squeeze with a wrench (JST YS-1614).
2. Cover the lead wires with the Special tube.
Pass the lead wires through the holder to fix.
P1
POWER CORD
CABINET BACK
HOLDER
BROWN LEAD
RED LEAD
BROWN LEAD
T1 POWER TRANSFORMER
BUSHING
Pinch the power cord with the holder and fit the holder into the hole on the cabinet back.
SW1
VOLTAGE SELECTOR
BROWN LEAD
RED LEAD

DISASSEMBLY PROCEDURES (REFER TO PAGES 7 AND 24)

1 CABINET TOP (131) REMOVAL

Remove 10 screws (A) and then remove the Cabinet Top (131).

2 FRONT PANEL ASS'Y (AA) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step 1 .
2. Remove 6 screws (B) and then remove the Front Panel Ass'y (AA).

3 MAIN and DRIVER P.C. BOARDS (PCB-4 to 6) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step 1 .
2. Disconnect 2 connectors (CW1 and CW504) from 2 connectors (CN405 and CN401) on the Main P.C. Board (PCB-4).
3. Remove 4 screws (C), 4 screws (D) and 2 screws (E) and then remove the Main and Driver P.C. Boards (PCB-4 to 6) with the Heat Sinks (183, 184, 186, 187, 178).

4 PHONO P.C. BOARD (PCB-1) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step 1 .
2. Pull out the Shaft (230).
3. Disconnect 2 connectors (W-806 and CW701) from 2 connectors (CN701 and CN3) on the Phono P.C. Board (PCB-1).
4. Remove 1 screw (F) and 4 screws (G), and then remove the Phono P.C. Board (PCB-1).

5 CONTROL P.C. BOARD (PCB-3) REMOVAL

1. Remove the Main and Driver P.C. Boards (PCB-4 to 6), referring to the previous step 3 .
2. Remove 4 screws (H) and disconnect 2 connectors (W-805 and CW802) from 2 connectors (CN502 and CN2) on the Control P.C. Board (PCB-3).
   Disconnect 1 connector (W-806) from 1 connector (CN701) on the Phono P.C. Board (PCB-1). Remove the Control P.C. Board (PCB-3).

6 TONE P.C. BOARD (PCB-2) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step 2 .
2. Pull out the 6 Rotary knobs (143 and 144).
3. Remove 6 hexagon nuts (I) and remove 3 screws (J).
4. Remove 2 screws (C), 4 screws(G), 7 screws (K), 4 screws (L) and screw (M) and the Chassis (162), than the Tone P.C. Board (PCB-2) can be removed. Unsolder the lead wires if necessary when removing each P.C. Board.

ALIGNMENT PROCEDURES (REFER TO PAGES 8 , 10 , 11 , 20 AND 23)

■ **Conditions:**
- Set the Source selector to the "CD" position.
- Set the Volume control to minimum.
- Set the Speaker selector to the "off" position.
- Make the adjustment at a room temperature of 77°F (25°C).

■ PHONO DRIVER ADJUSTMENT

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TP701.	VR601	2.2V
2	Connect the Digital Volt Meter to TP702.	VR602	2.2V

■ IDLING CURRENT ADJUSTMENT

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TP403.	VR405	43mV
2	Connect the Digital Volt Meter to TP404.	VR406	43mV

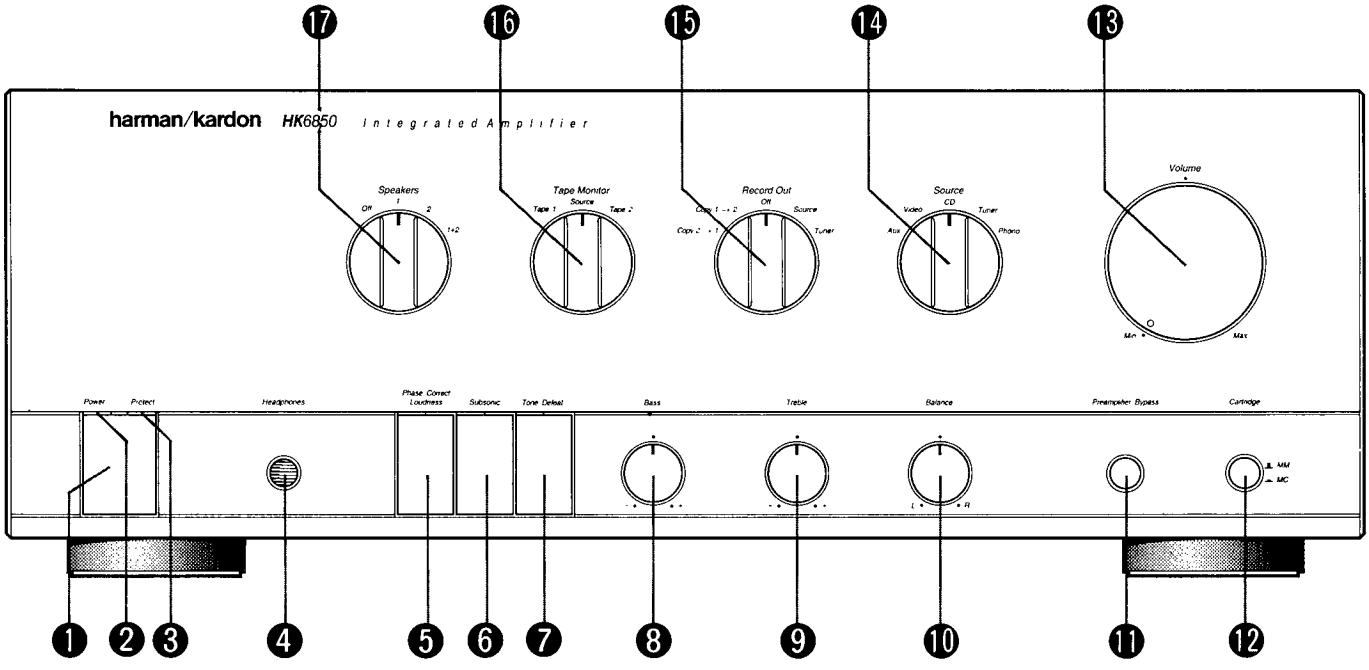
■ MAIN OFFSET DC BALANCE ADJUSTMENT

- Set the Speaker Selector switch to the "1" position.

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TM15 and TM17.	VR401	0mV
2	Connect the Digital Volt Meter to TM16 and TM18.	VR402	0mV

■ After the above adjustment, leave the unit with its power on for longer than 30 minutes and then repeat the same adjustment.

CONNROLS AND FUNCTIONS



❶ Power Switch

Press this switch to turn the unit "On". Press it again to turn it "Off".

❷ Power Indicator

This indicator is illuminated in green when the power switch is "On" and is not illuminated when the power switch is "Off".

❸ PROTECT light

This light indicates that the protection circuitry of your amplifier is engaged. The light will come on under two circumstances:

• When you turn the unit on. As the unit prepares itself for operation, a muting circuit temporarily prevents pops or other noise from reaching your speakers. When the unit is ready for operation (in approximately 10 seconds), the light will go off.

• When the unit detects a problem. This light will come on if your speakers wires are touching, causing a short circuit, of if your amplifier overheats. In the case of overheating, a thermal sensor will shut down the unit before damage can occur. Depending on the cause and extent of the overheating, the unit may take some time to cool down, and the protection circuit will remain in operation until the unit is cool enough to operate safely. In the case of a short circuit in the speaker wires, the protection circuitry will attempt to reset itself every 10 seconds, and you may hear a slight click as it does so. The protection circuit will remain in operation until the condition is corrected.

❹ HEADPHONE jack

Stereo headphones with a standard 6.5 mm (1/4") plug can be connected to this jack. You can listen to headphones regardless of whether your speakers are playing. To listen to headphones only, turn the speaker selector to "OFF."

❺ PHASE CORRECT LOUDNESS

At low volume levels, your ear is less sensitive to very low bass frequencies than it is at normal listening levels. The loudness button provides a special equalization curve that boosts low frequencies. The loudness button is useful for restoring full frequency balance at low volume levels, and can also be used to improve the bass response of small bookshelf speakers. The indicator light will be lit when PHASE CORRECT LOUDNESS is on.

❻ SUBSONIC filter

Warped records and turntable resonance can generate sub-audible frequencies that can cause your speaker's woofer cones to visibly flutter. This very low frequency noise, while inaudible, can rob power from your amplifier, can cause feedback through your turntable, can cause intermodulation distortion at audible frequencies, and can actually damage your woofers if the movement is violent enough. The subsonic filter reduces these inaudible frequencies at 6dB per octave below 15Hz. The audible portion of the frequency range will not be affected, so it is useful to leave the subsonic filter on at all times when listening to the turntable. The indicator light will be lit when the SUBSONIC filter is on.

❼ TONE DEFEAT switch

When TONE DEFEAT is turned on, the bass and treble controls have no effect. The TONE DEFEAT switch internally bypasses the tone control circuitry, resulting in completely unaltered frequency response. If you want to use the bass and treble controls, turn TONE DEFEAT off. The indicator light will be lit when the TONE DEFEAT switch is on.

❽ BASS control
The BASS control boosts or reduces the low frequency sound level. The BASS control affects only frequencies below 300Hz, and allows changes of up to ±10dB. The BASS tone control, in some circumstances, can help you adjust the overall sound of your system. For example, "boomy" room acoustics may be improved with a slight decrease in the bass, or the sound of smaller loudspeakers lacking in bass may be improved with a bass boost.

❾ TREBLE control
The TREBLE control boosts or reduces the high frequency sound level. The TREBLE control affects only frequencies above 3000Hz, and allows changes of up to ±10dB. The TREBLE tone control, in some circumstances, can help you adjust the overall sound of your system. For example, an overly shrill recording or "bright" room acoustics may be improved by a reduction in the amount of treble.

❿ BALANCE CONTROL
The BALANCE control distributes the sound between the right and left speakers. For equal balance in each channel, set the control in the center.

⓫ PREAMPLIFIER BYPASS
When the PREAMPLIFIER BYPASS switch is on, the source signal goes directly to the input of the amplifier, bypassing all tone controls and other preamplifier circuitry and is attenuated only by the volume control.

⓬ CARTRIDGE selector
This switch sets up the gain and input impedance of your amplifier's internal circuitry to match the type of cartridge being used on your turntable. Be sure you connect your turntable to the appropriate PHONO input jacks on the back of the HK6850 (MM for moving magnet cartridges, or MC for moving coil cartridges). Then use this switch to select the type of cartridge mounted on your turntable. Note that you can connect both moving coil and moving magnet cartridge inputs and use this switch to select between them. The MC setting engages a special MC step-up amplifier stage.

⓭ VOLUME control
This knob controls the sound level. Turn the VOLUME control all the way down before you turn on your amplifier or change sound source. This will protect your speakers from being damaged by sudden high-volume sound.

⓮ SOURCE selector
The SOURCE selector controls which program source you are listening to.
• PHONO - Selects a turntable connected to either the MM or MC phone jack.
• TUNER - Selects an AM or FM broadcast from a tuner connected to the tuner jacks.
• CD - Selects a compact disc player connected to the CD jacks.
• VIDEO - Selects sound from an audio/video component such as a camcorder, TV tuner connected to the VIDEO jacks.
• AUX - Selects sound from any component connected to the AUX jacks.

⓯ RECORD OUT selector
This selector controls which program source you can record on the tape deck(s) connected to your unit. Whatever source you select is sent to all tape decks connected to your HK6850, so you can record on both decks simultaneously.
• TUNER - In this position, the tuner signal is the source you are recording regardless of the position of the SOURCE selector. This permits you to record the tuner signal while listening to a completely different source (selected on the SOURCE selector, described above).
• SOURCE - In this setting, whatever source you have selected on the SOURCE selector will be the source you are recording.
• OFF - Leave the selector in this position when you are not recording. This will ensure the purest sound quality when you listen directly to a source selected with the SOURCE selector.
• COPY 1 → 2 - In this position, you are recording *from* the deck connected to the TAPE 1 jacks *to* the deck connected to the TAPE 2 jacks.
• COPY 2 → 1 - In this position, you are recording *to* the deck connected to the TAPE 1 jacks *from* the deck connected to the TAPE 2 jacks.
For example, if you want to make a tape recording of a CD, set the RECORD OUT selector to SOURCE, and set the SOURCE selector to CD.

⓰ TAPE MONITOR selector
The TAPE MONITOR selector enables you to listen to your tape deck. Note that this selector does not select the source for recording. It selects only the deck you are listening to. An important use for this selector is for monitoring during recording. To monitor during recording, select the deck that is recording. For listening to one tape deck while the other deck is recording a different source, select the deck that is not recording.
• TAPE 1 - In this position, you are listening to the deck connected to the TAPE 1 jacks.
• SOURCE - The SOURCE position turns off the output from your deck and returns you to the source you have selected on the SOURCE selector.
• TAPE 2 - In this position, you are listening to the deck connected to the TAPE 2 jacks.

⓱ SPEAKER selector
You can connect either one or two sets of speakers to your HK6850. This selector enables you to play a single set of speakers by themselves, both sets of speakers at the same time, or to turn both sets of speakers off for headphone-only listening.
• OFF - Select this position to turn off both sets of speakers.
• 1 - Select this position to play the speakers connected to the SPEAKER SYSTEM 1 terminals.
• 2 - Select this position to play the speakers connected to the SPEAKER SYSTEM 2 terminals.
• 1+2 - Select this position to play both sets of speakers at the same time.

GENERAL UNIT PARTS LIST

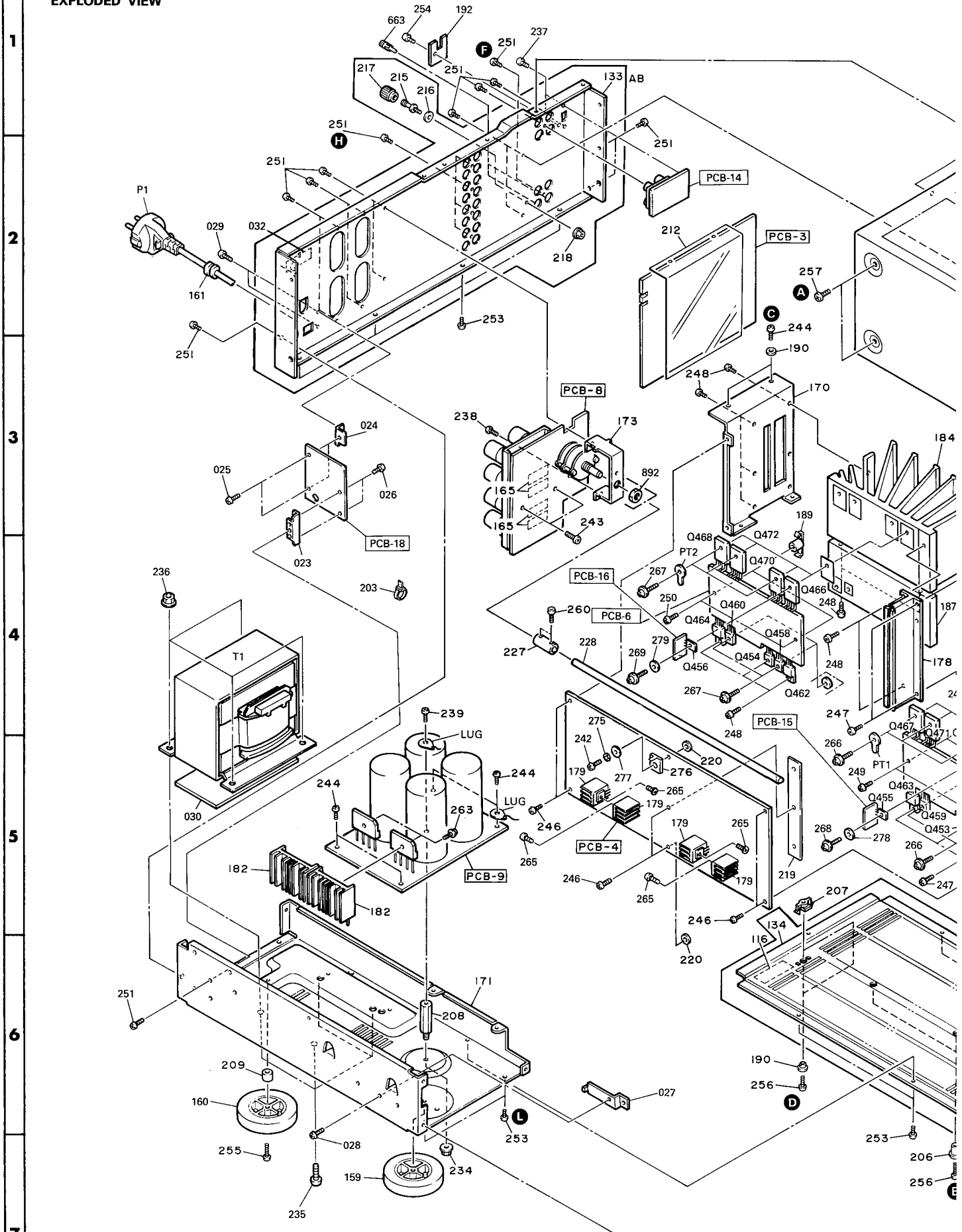
Ref. No.	Part No.	Description
AA	A443-HK6850A	CABINET FRONT ASSEMBLY (G)
AA	A443-HK6850B	CABINET FRONT ASSEMBLY (GB) (IB)
AB	A424-HK6850C	CABINET BACK ASSEMBLY
BB	B219-HK6850A	METAL FITTING ASSEMBLY
023	2219-8349	METAL FITTG, VOLTAGE SELECTOR
024	2219-8350	METAL FITTG, VOLTAGE SELECTOR (x 2)
025	2327-R0130062	SCREW, BND+ (3 x 6mm) (x 2)
026	2347-R0130062	SCREW, BND T+ (3 x 6mm) (x 2)
027	2219-8283	METAL FITTG, TRANSFORMER BOTTOM
028	2327-R0130062	SCREW, BND+ (3 x 6mm)
029	2459-3003511	RIVET PLASTIC (x 2)
030	2219-8372	METAL FITTG, TRANS BOTTOM
031	1756-R01TS122	LABEL, SUB FUSE (x 2)
032	1756-21905	LABEL (G) (GB)
116	1117-78	SERIAL LABEL, PRODUCT NO.
131	1414-14901	CABINET TOP
133	1424-35801	CABINET BACK
134	1424-29901	CABINET BOTTOM
136	1443-14101	PANEL, FRONT (G)
136	1443-14102	PANEL, FRONT (GB) (IB)
138	1562-08401	FRAME, L (G)
138	1562-08402	FRAME, L (GB) (IB)
139	1562-08501	FRAME, R (G)
139	1562-08502	FRAME, R (GB) (IB)
140	1568-00301	FRAME, WIRING (x 3)
142	1630-04701	ROTARY KNOB, VOLUME (G)
142	1630-04702	ROTARY KNOB, VOLUME (GB) (IB)
143	1630-04001	ROTARY KNOB, TAPE MONITOR, RECORD OUT, SOURCE (G)
143	1630-04002	ROTARY KNOB, TAPE MONITOR, RECORD OUT, SOURCE (GB) (IB)
144	1630-04101	ROTARY KNOB, BASS, TREBLE, BALANCE (G)
144	1630-04102	ROTARY KNOB, BASS, TREBLE, BALANCE (GB) (IB)
145	1634-05901	ROTARY KNOB, SPEAKERS (G)
145	1634-05902	ROTARY KNOB, SPEAKERS (GB) (IB)
147	1660-01601	PUSH BUTTON, POWER (G)
147	1660-01602	PUSH BUTTON, POWER (GB) (IB)
148	1660-01701	PUSH BUTTON, PHASE CORRECT LOUDNESS, SUBSONIC, TONE DEFEAT (G)
148	1660-01702	PUSH BUTTON, PHASE CORRECT LOUDNESS, SUBSONIC, TONE DEFEAT (GB) (IB)
150	1662-67201	PUSH BUTTON, PREAMPLIFIER BYPASS, CARTRIDGE (G)
150	1662-67202	PUSH BUTTON, PREAMPLIFIER BYPASS, CARTRIDGE (GB) (IB)
153	1714-02601	NAME PLATE, BADGE (G)
153	1714-02602	NAME PLATE, BADGE (GB) (IB)
155	1732-06901	INDICATOR, POWER, PROTECT, PHASE CORRECT LOUDNESS, SUBSONIC, TONE DEFEAT
157	1742-08501	ORNAMENT, POWER, TONE (G)
157	1742-08502	ORNAMENT, POWER, TONE (GB) (IB)
158	1742-08401	ORNAMENT, PREAMPLIFIER BYPASS, CARTRIDGE (G)
158	1742-08402	ORNAMENT, PREAMPLIFIER BYPASS, CARTRIDGE (GB) (IB)
159	1319-03901	LEG (x 3)
160	1319-02301	LEG, TRANS
161	2114-71246	BUSHING, AC CORD
162	2211-7308	CHASSIS
163	2218-7038	BRACKET, FIX, MAIN PCB (L) (x 2)
164	2218-7038	BRACKET, FIX, MAIN PCB (R) (x 2)
165	2218-7038	BRACKET, FIX, SPEAKERS PCB (x 4)
166	2218-89	BRACKET, FIX, HEADPHONES
167	2219-8273	METAL FITTG, HEADPHONES
168	2219-8267	METAL FITTG, PHONO BOTTOM
169	2219-8268	METAL FITTG, HEAT SINK (L)
170	2219-8269	METAL FITTG, HEAT SINK (R)
171	2219-8266	METAL FITTG, TRANS
172	2219-8271	METAL FITTG, PHONO TOP
173	2219-8272	METAL FITTG, SPEAKERS SWITCH
174	2219-8351	METAL FITTG, POWER SWITCH
176	2222-7179	HEAT SINK, TONE
177	2222-7194	HEAT SINK, PHONO (x 2)
178	2222-7266	HEAT SINK, HEAT SINK JOINT
179	2222-7315	HEAT SINK, DRIVER (x 4)
182	2222-7269	HEAT SINK, SCR (x 2)
183	2222-7304	HEAT SINK, MAIN (L)
184	2222-7305	HEAT SINK, MAIN (R)
186	2222-7275	HEAT SINK, MAIN (L)
187	2222-7275	HEAT SINK, MAIN (R)
188	2360-7064	BOSS, SPE, MAIN PCB (L) (x 2)
189	2360-7064	BOSS, SPE, MAIN PCB (R) (x 2)
190	2132-7136	SPACER (x 6)
192	2240-7395	HOLDER, PRE OUT/MAIN IN SWITCH
193	2240-7397	HOLDER, TONE SWITCH (x 3)
195	2240-7360	HOLDER, SPEAKER SWITCH SHAFT
196	2240-7361	HOLDER, SPEAKER KNOB SHAFT
197	2240-7362	HOLDER, LINK
198	2240-7363	HOLDER, SHAFT HOLD (FRONT)
199	2240-7364	HOLDER, SHAFT HOLD (REAR)
200	2240-7396	HOLDER, POWER LED
201	2240-7366	HOLDER, TONE LED (x 2)
202	2240-7369	HOLDER, SUB PCB (x 3)
203	2240-R0101	HOLDER, WIRING (x 36)
206	2360-7019	BOSS, SPE, BOTTOM (x 2)
207	2360-7020	BOSS, SPE, BOTTOM (x 4)
208	2362-961410	BOSS, THREAD, TRANS BOTTOM
209	2363-501724	BOSS, PIPE, TRANS LEG
212	2224-7132	INSULATOR, CABINET BACK
213	2216-7184	SHIELD PLATE, CHASSIS
214	2459-3005511	RIVET, PLASTIC, SHIELD PLATE (x 2)
215	2310-7036	SCREW, SPE, GND
216	2410-7018	WASHER, SPE, GND
217	2440-7027	NUT, SPE, GND
218	2440-7016	NUT, SPE, GND
219	2224-7100	INSULATOR, HEAT SINK
220	2402-0374	WASHER, PLASTIC, DRIVER PCB (x 2)
222	2431-0151	FASTENER, NAME PLATE (x 2)
223	2459-3008011	RIVET, PLASTIC, LINK HOLD (x 2)
224	2446-30229	NUT, HEX, SPEAKER KNOB SHAFT
225	2111-1387	FELT, SPEAKER KNOB SHAFT
226	2403-301	WASHER, POLY
227	2601-7069	SHAFT, SPEAKER JOINT
228	2601-7188	SHAFT, SPEAKER SWITCH
229	2601-7189	SHAFT, SPEAKER KNOB
230	2601-7190	SHAFT, MC
231	2112-11773	SPONGE, PHONO PCB
232	2112-11800	SPONGE, HOLDER
233	2112-11771	SPONGE, TRANS BOTTOM (x 4)
234	2440-7016	NUT, SPE, TRANS BOTTOM
235	2327-R0140102	SCREW, BND + (4 x 10mm) (x 4)
236	2440-60	NUT, SPE (x 4)
237	2327-R0126044	SCREW, BND+ (2.6 x 4mm) (x 2)
238	2327-R0130062	SCREW, BND+ (3 x 6mm)
239	2327-R0130062	SCREW, BND+ (3 x 6mm) (x 8)
242	2347-R0130102	SCREW, BND T+ (3 x 10mm)
243	2343-300826	SCREW, CSK T+ (3 x 8mm) (x 2)
244	2347-R0130062	SCREW, BND T+ (3 x 6mm) (x 18)
245	2347-R0130082	SCREW, BND T+ (3 x 8mm) (x 3)
246	2347-R0130082	SCREW, BND T+ (3 x 8 mm) (x 6)
247	2347-R0130082	SCREW, BND T+ (3 x 8mm) (x 11)
248	2347-R0130082	SCREW, BND T+ (3 x 8mm) (x 11)
249	2347-R0130122	SCREW, BND T+ (3 x 12mm) (x 2)
250	2347-R0130122	SCREW, BND T+ (3 x 12mm) (x 2)
251	2347-R0130084	SCREW, BND T+ (3 x 8mm) (x 19)
252	2347-R0130062	SCREW, BND T+ (3 x 6mm) (x 3)
253	2347-R0130064	SCREW, BND T+ (3 x 6mm) (x 24)
254	2347-R0130064	SCREW, BND T+ (3 x 6mm)
255	2347-R0130124	SCREW, BND T+ (3 x 12mm)
256	2347-R0130164	SCREW, BND T+ (3 x 16mm) (x 6)
257	2347-R0140064	SCREW, BND T+ (4 x 6mm) (x 8)
260	2396-300549	SCREW, SK HEX (3 x 5mm) (x 2)
261	2557-300829	SCREW, B SPW + (3 x 8mm) (x 2)
263	2557-300829	SCREW, B SPW + (3 x 8mm) (x 2)
264	2557-300829	SCREW, B SPW + (3 x 8mm) (x 2)
265	2557-300829	SCREW, B SPW + (3 x 8mm) (x 4)
266	2557-301229	SCREW, B SPW + (3 x 12mm) (x 5)
267	2557-301229	SCREW, B SPW + (3 x 12mm) (x 5)
268	2557-301629	SCREW, B SPW + (3 x 16mm)
269	2557-301629	SCREW, B SPW + (3 x 16mm)
271	2218-R0130	BRACKET, FIX, WIRING (x 3)
272	2651-2101733	SPRING, POWER (x 4)
275	2412-3022	WASHER, SPRING
276	2219-7945	METAL FITTING, DRIVER GND
277	2401-0373	WASHER, METAL, DRIVER GND
278	2401-0373	WASHER, METAL
279	2401-0373	WASHER, METAL
892	2440-62	NUT, SPE HEX

NOTE

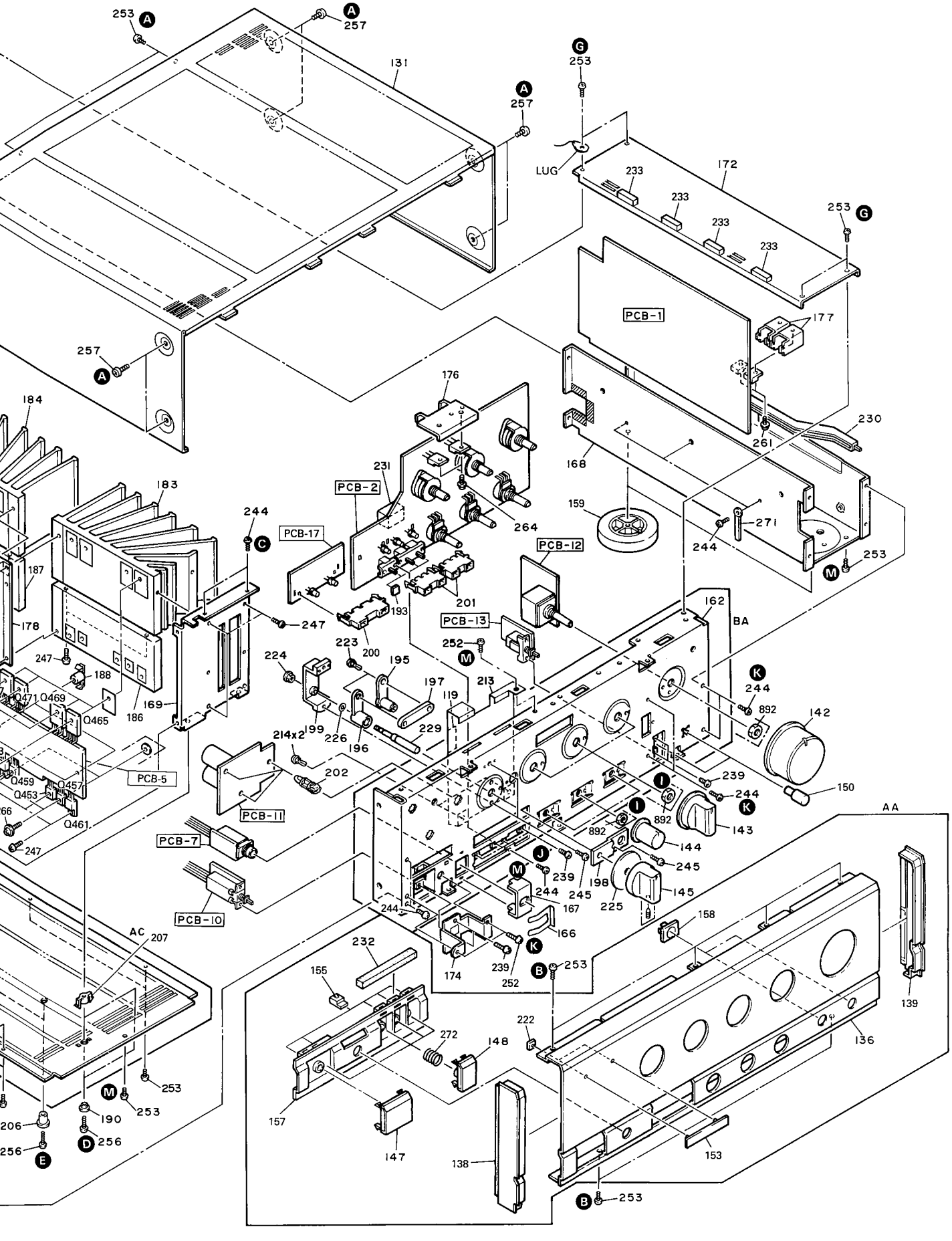
⚠ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

GENERAL UNIT

EXPLODED VIEW



	F	G	H	I	J


253
257
131
LUG
172
233
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PCB-1
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261
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231
PCB-2
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183
PCB-17
PCB-12
187
201
193
162
BA
178
247
223
200
195
224
252
PCB-13
197
213
119
188
169
186
Q471
Q469
Q465
214x2
199
226
196
229
892
142
239
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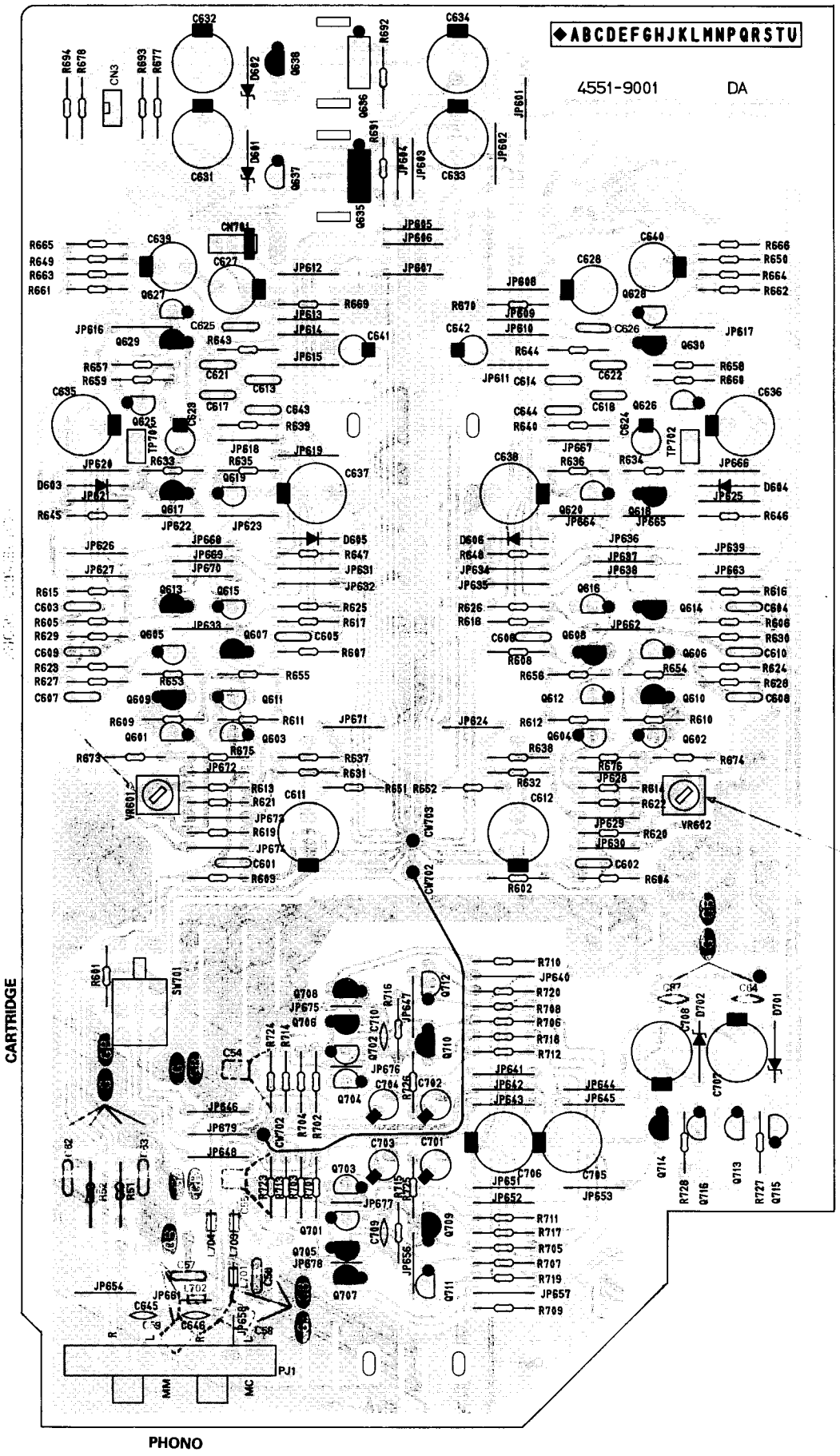
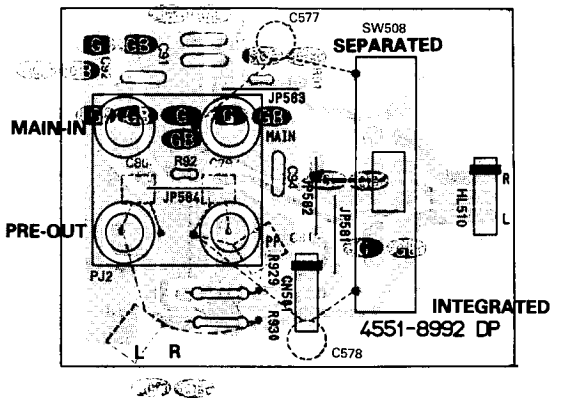
225
198
167
166
158
174
232
155
222
272
148
136
139
157
147
138
153
PCB-5
PCB-11
PCB-7
PCB-10
202
Q459
Q457
Q453
Q461
AC
207
190
256
206
AA

P.C. BOARDS

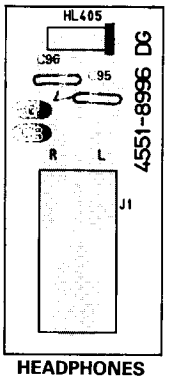
PCB-1 Phono P.C. Board



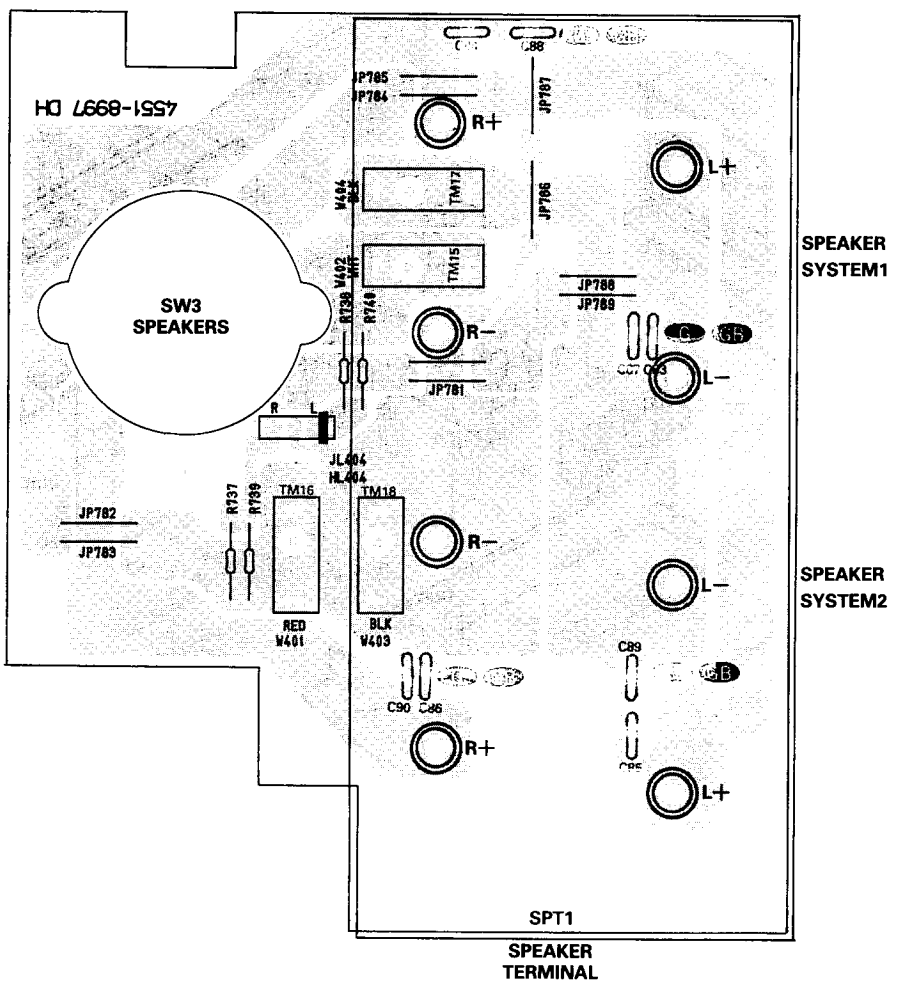
PCB-14 Pre/Main Separation P.C. Board



PCB-7 Headphones P.C. Board

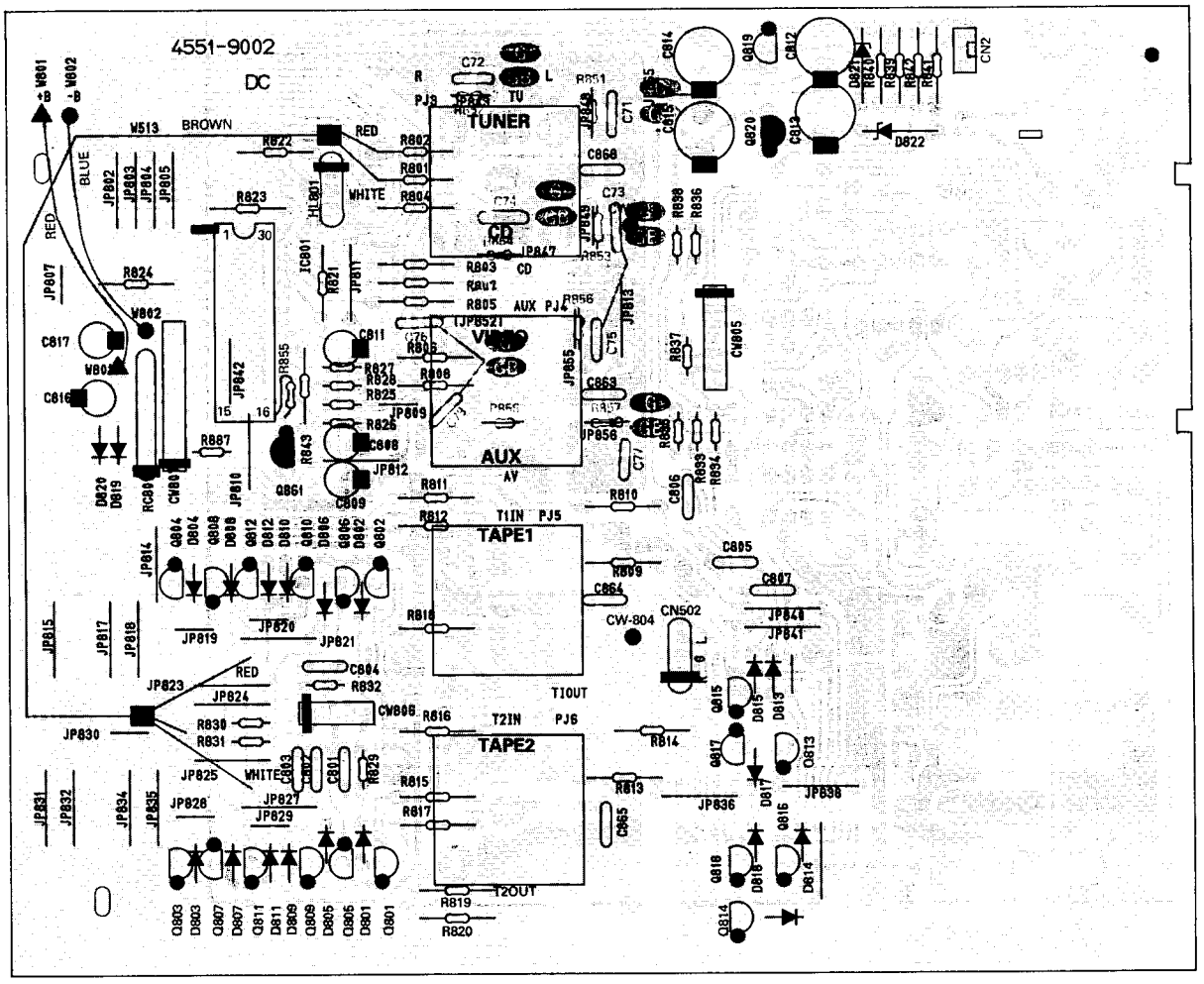


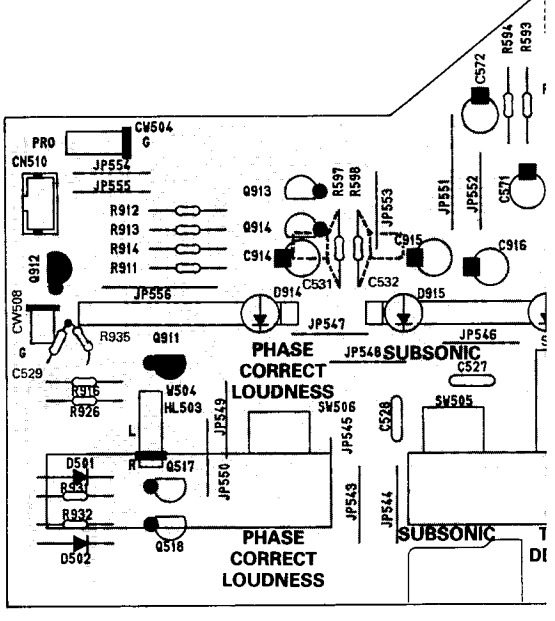
PCB-8 Speaker P.C. Board



P.C. BOARDS

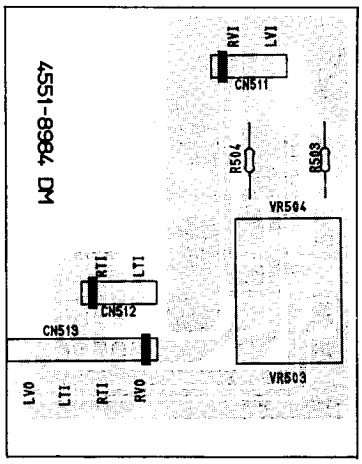
PCB-3 Control P.C. Board





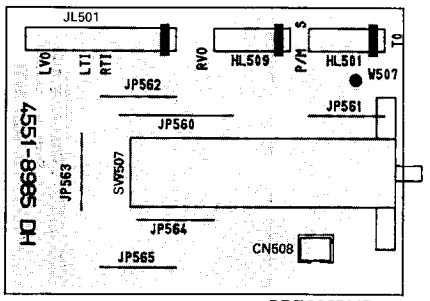
F G H I J

PCB-12 Volume P.C. Board



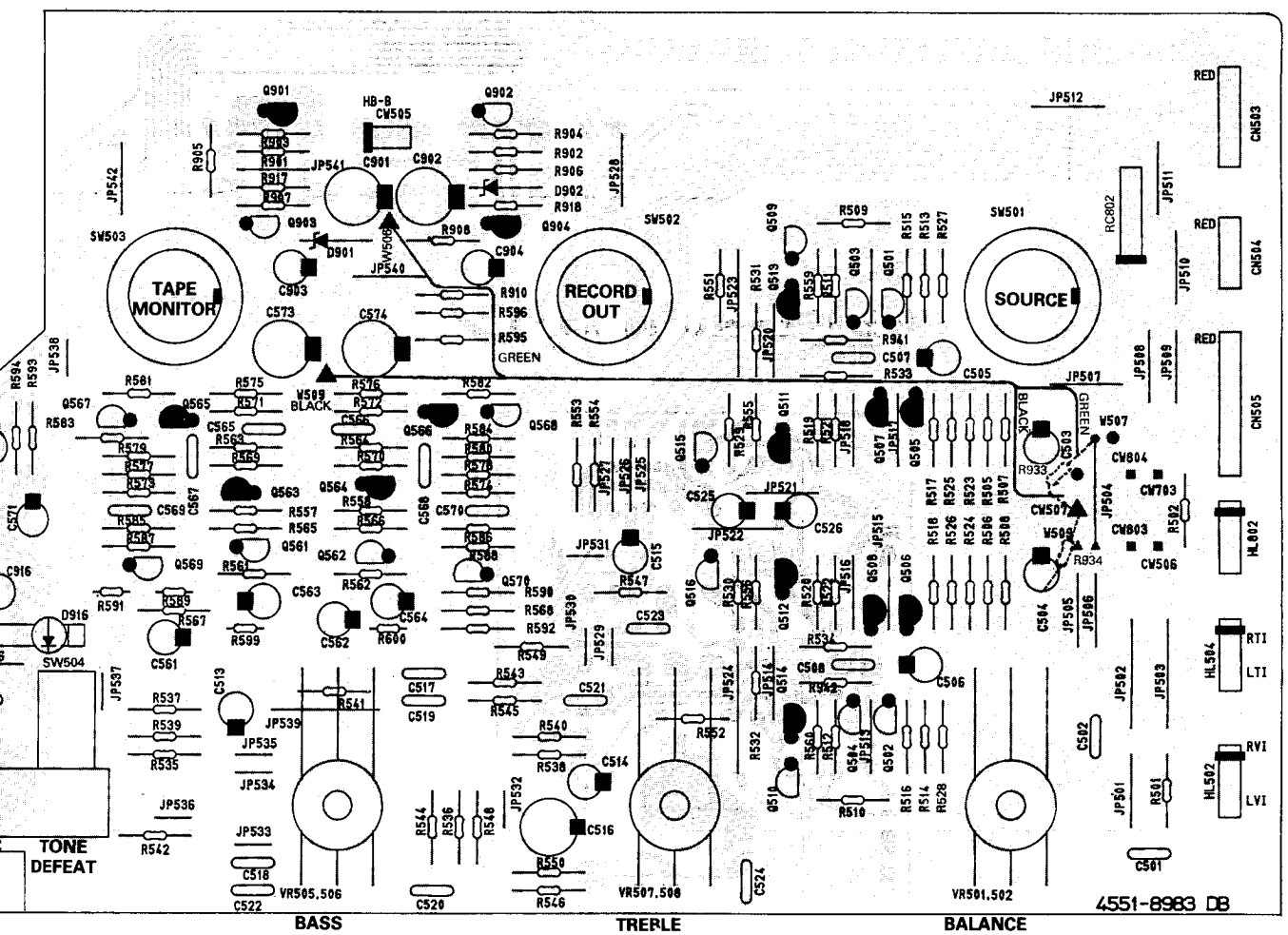
VOLUME

PCB-13 Bypass P.C. Board



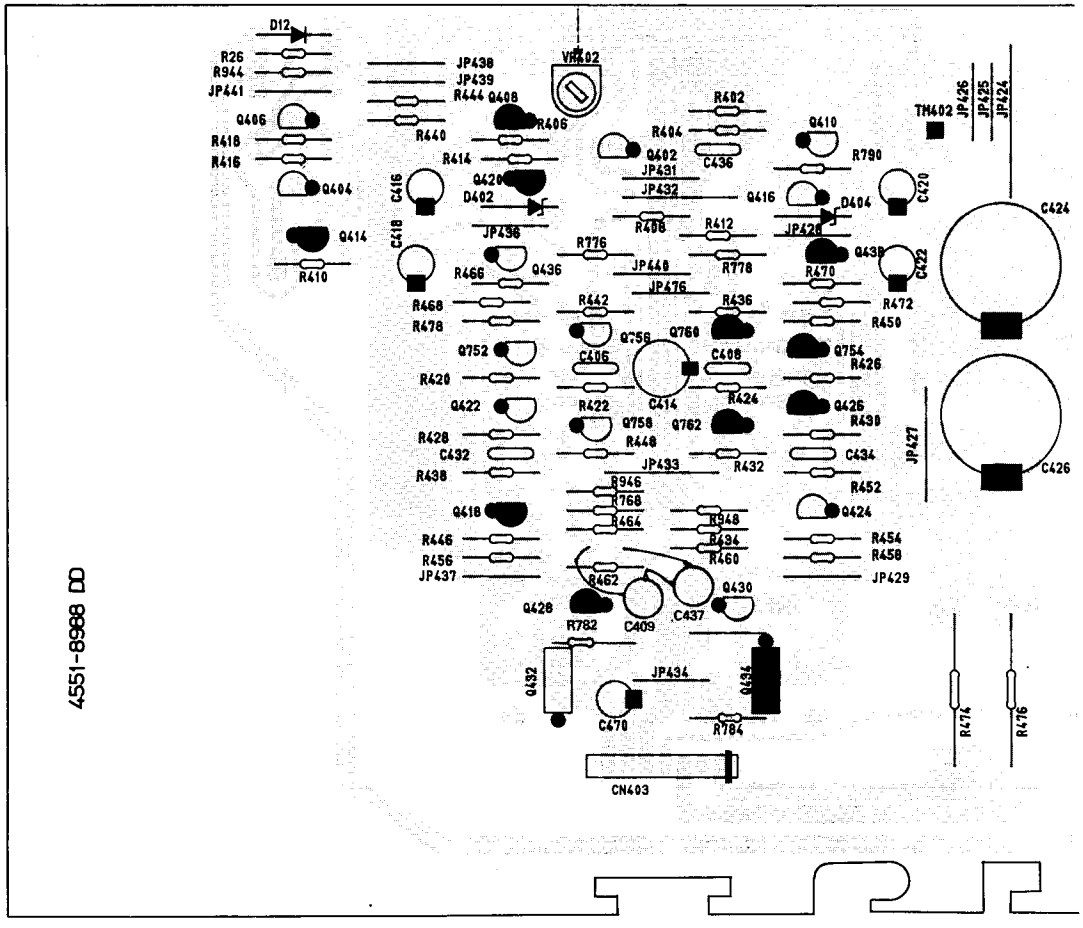
PREAMPLIFIER
BYPASS

PCB-2 Tone P.C. Board

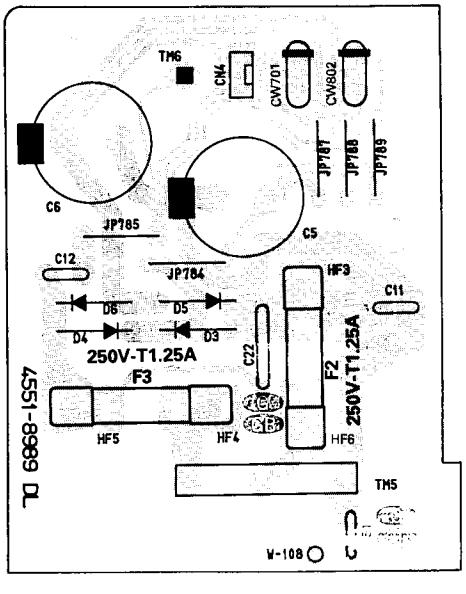


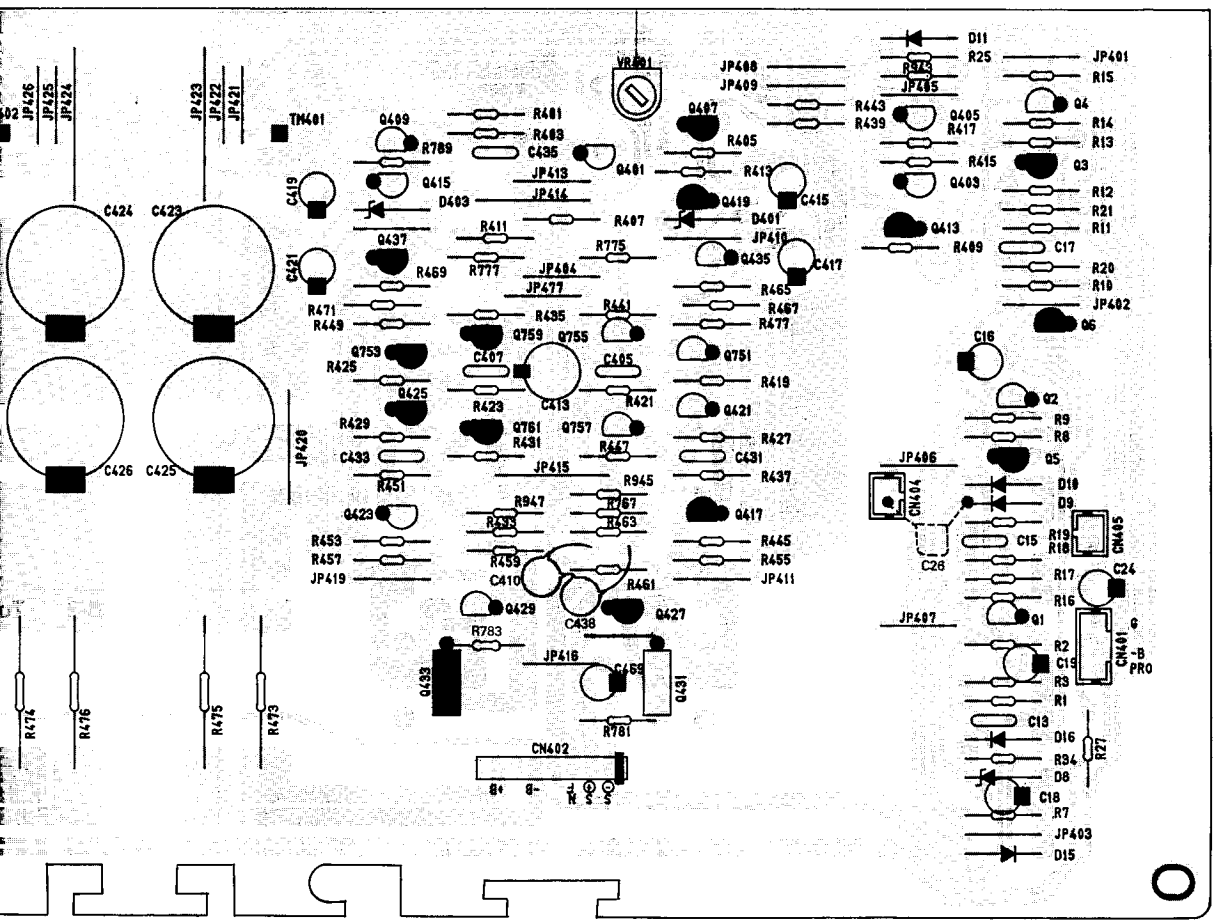
P.C. BOARDS

PCB-4 Driver P.C. Board

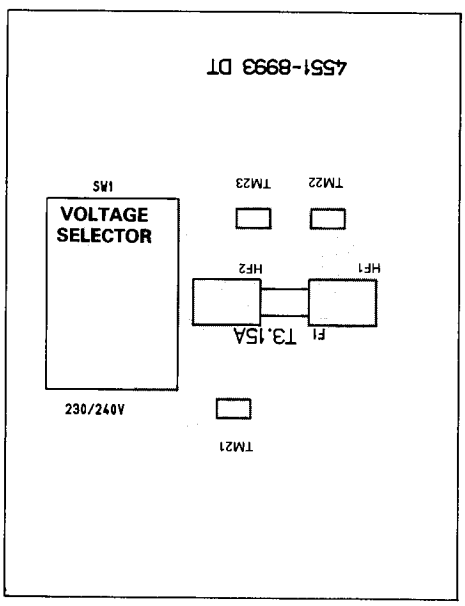


PCB-11 Sub Power Supply P.C. Board



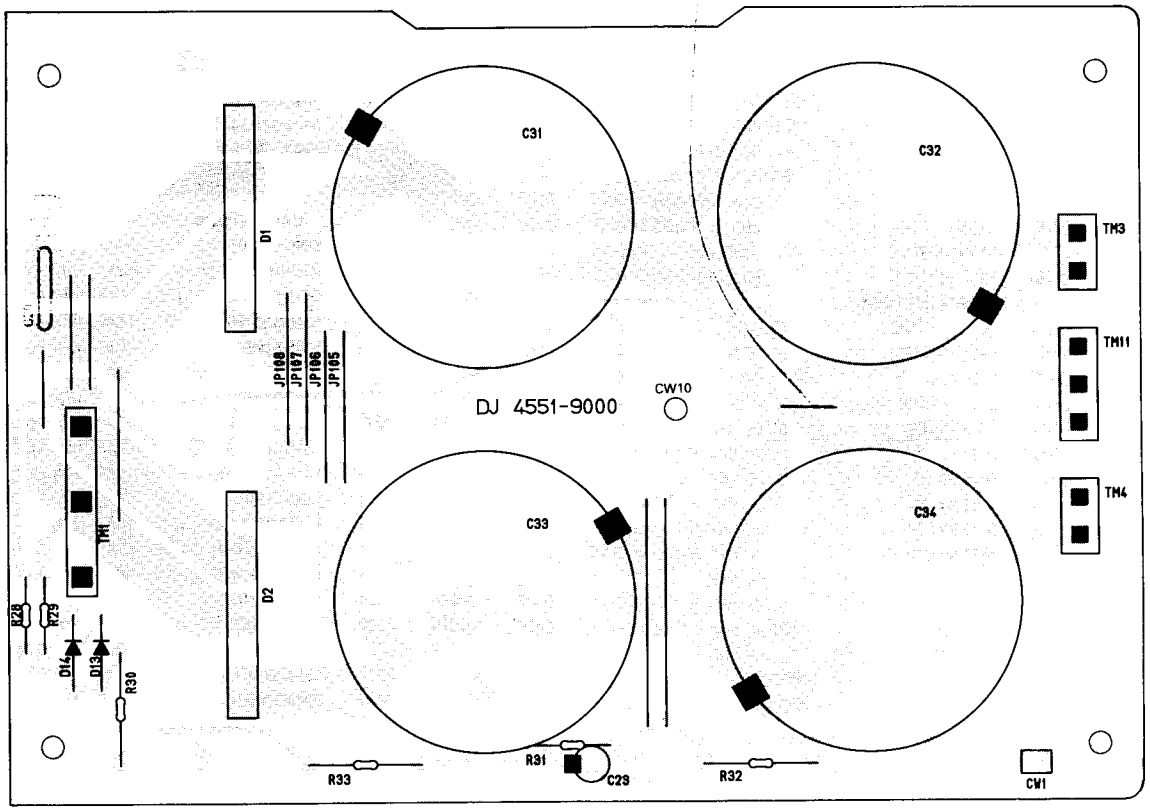


PCB-18 Volume Selector P.C. Board

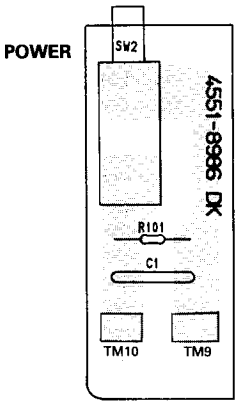


P.C. BOARDS

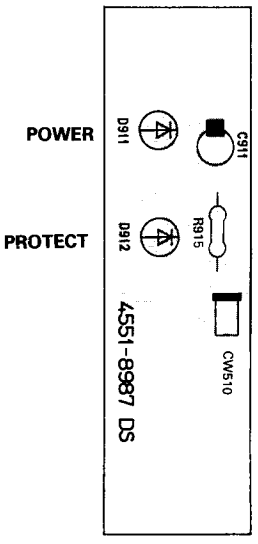
PCB-9 Main Power Supply P.C. Board



PCB-10 Power Switch P.C. Board

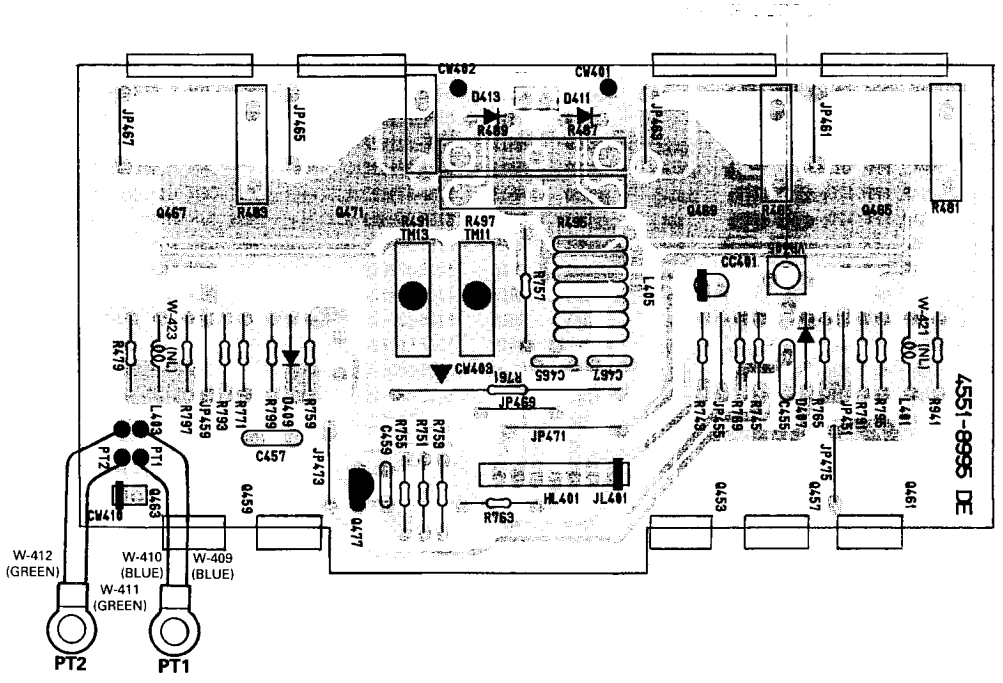


PCB-17 Power LED P.C. Board

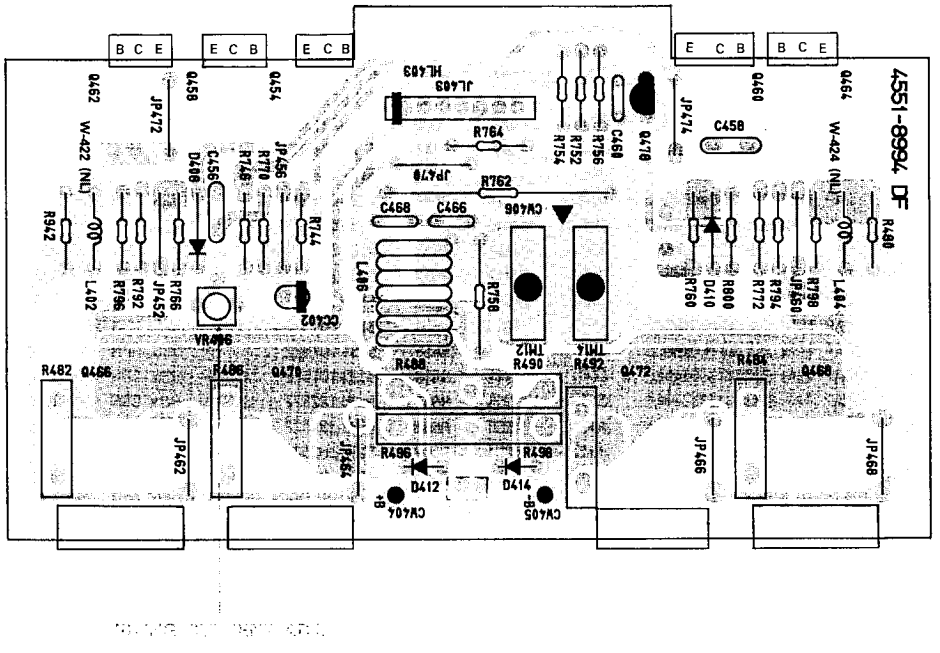


F G H I J

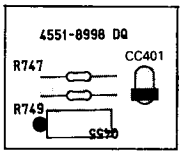
PCB-5 **Main Lch P.C. Board**



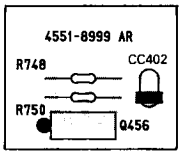
PCB-6 **Main Rch P.C. Board**



PCB-15 **Terminal L P.C. Board**



PCB-16 **Terminal R P.C. Board**



ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
		PCB-1 PHONO P.C. BOARD	
		CAPACITORS	
058A	C54	5353-470534	CAP, MCA 47p (G) (GB)
058A	C55	5353-470534	CAP, MCA 47p (G) (GB)
060A	C56	5359-1035851	CAP, PPP .01 μ (G) (GB)
060A	C57	5359-1035851	CAP, PPP .01 μ (G) (GB)
060A	C58	5359-1035851	CAP, PPP .01 μ (G) (GB)
060A	C59	5359-1035851	CAP, PPP .01 μ (G) (GB)
061A	C62	5359-1215851	CAP, PPP 120p (G) (GB)
061A	C63	5359-1215851	CAP, PPP 120p (G) (GB)
063A	C64	5361-223ZF	CAP, CER .022 μ (G) (GB)
063A	C87	5361-223ZF	CAP, CER .022 μ (G) (GB)
334	C601	5353-121534	CAP, MCA 120p (IB)
334A	C601	5353-820534	CAP, MCA 82p (G) (GB)
334	C602	5353-121534	CAP, MCA 120p (IB)
334A	C602	5353-820534	CAP, MCA 82p (G) (GB)
335	C603	5359-2215851	CAP, PPP 220p
335	C604	5359-2215851	CAP, PPP 220p
335	C605	5359-2215851	CAP, PPP 220p
335	C606	5359-2215851	CAP, PPP 220p
341	C607	5354-224593	CAP, MYL .22 μ
341	C608	5354-224593	CAP, MYL .22 μ
341	C609	5354-224593	CAP, MYL .22 μ
341	C610	5354-224593	CAP, MYL .22 μ
333	C611	5345-477A0952	CAP, MINI ELE 470 μ/6.3V
333	C612	5345-477A0952	CAP, MINI ELE 470 μ/6.3V
336	C613	5359-1035851	CAP, PPP .01 μ
336	C614	5359-1035851	CAP, PPP .01 μ
340	C617	5359-3315851	CAP, PPP 330p
340	C618	5359-3315851	CAP, PPP 330p
337	C621	5359-3325851	CAP, PPP 3300p
337	C622	5359-3325851	CAP, PPP 3300p
332	C623	5345-S19CM106	CAP, MINI ELE 10 μ/16V
332	C624	5345-S19CM106	CAP, MINI ELE 10 μ/16V
339	C625	5359-5615851	CAP, PPP 560p
339	C626	5359-5615851	CAP, PPP 560p
331	C627	5345-S19CM476	CAP, MINI ELE 47 μ/16V
331	C628	5345-S19CM476	CAP, MINI ELE 47 μ/16V
392	C631	5345-227F045	CAP, MINI ELE 220 μ/50V
392	C632	5345-227F045	CAP, MINI ELE 220 μ/50V
392	C633	5345-227F045	CAP, MINI ELE 220 μ/50V
392	C634	5345-227F045	CAP, MINI ELE 220 μ/50V
330	C635	5345-227F045	CAP, MINI ELE 220 μ/50V
330	C636	5345-227F045	CAP, MINI ELE 220 μ/50V
330	C637	5345-227F045	CAP, MINI ELE 220 μ/50V
330	C638	5345-227F045	CAP, MINI ELE 220 μ/50V
331	C639	5345-S19CM476	CAP, MINI ELE 47 μ/16V
331	C640	5345-S19CM476	CAP, MINI ELE 47 μ/16V
329	C641	5345-S19CM336	CAP, MINI ELE 33 μ/16V
329	C642	5345-S19CM336	CAP, MINI ELE 33 μ/16V
338	C643	5359-8215851	CAP, PPP 820p
338	C644	5359-8215851	CAP, PPP 820p
664	C645	5361-103KB	CAP, CER .01 μ
664	C646	5361-103KB	CAP, CER .01 μ
298	C701	5345-S19BM226	CAP, MINI ELE 22 μ/10V
298	C702	5345-S19BM226	CAP, MINI ELE 22 μ/10V
298	C703	5345-S19BM226	CAP, MINI ELE 22 μ/10V
298	C704	5345-S19BM226	CAP, MINI ELE 22 μ/10V
320	C705	5345-227D041	CAP, MINI ELE 220 μ/25V
320	C706	5345-227D041	CAP, MINI ELE 220 μ/25V
320	C707	5345-227D041	CAP, MINI ELE 220 μ/25V
320	C708	5345-227D041	CAP, MINI ELE 220 μ/25V
311	C709	5353-050934	CAP, MCA 5p (IB)
311A	C709	5353-020934	CAP, MCA 2p (G) (GB)
311	C710	5353-050934	CAP, MCA 5p (IB)
311A	C710	5353-020934	CAP, MCA 2p (G) (GB)
339	C625	5359-5615851	CAP, PPP 560p
339	C625	5359-5615851	CAP, PPP 560p
		RESISTORS	
062A	R51	5135-102522	RES, CBN 1/2P 1K (G) (GB)
062A	R52	5135-102522	RES, CBN 1/2P 1K (G) (GB)
344	R601	5135-470522	RES, CBN 1/2P 47 (IB)
344A	R601	5135-102522	RES, CBN 1/2P 1K (G) (GB)
344	R602	5135-470522	RES, CBN 1/2P 47 (IB)
344A	R602	5135-102522	RES, CBN 1/2P 1K (G) (GB)
345	R603	5135-473522	RES, CBN 1/2P 47K
345	R604	5135-473522	RES, CBN 1/2P 47K
363	R605	5174-102381	RES, MTL 1/4P 1K
363	R606	5174-102381	RES, MTL 1/4P 1K
363	R607	5174-102381	RES, MTL 1/4P 1K
363	R608	5174-102381	RES, MTL 1/4P 1K
359	R609	5135-221522	RES, CBN 1/2P 220
359	R610	5135-221522	RES, CBN 1/2P 220
359	R611	5135-221522	RES, CBN 1/2P 220
359	R612	5135-221522	RES, CBN 1/2P 220
350	R613	5135-330522	RES, CBN 1/2P 33
350	R614	5135-330522	RES, CBN 1/2P 33
361	R615	5135-331522	RES, CBN 1/2P 330
361	R616	5135-331522	RES, CBN 1/2P 330
361	R617	5135-331522	RES, CBN 1/2P 330
361	R618	5135-331522	RES, CBN 1/2P 330
360	R619	5135-680522	RES, CBN 1/2P 68
360	R620	5135-680522	RES, CBN 1/2P 68
360	R621	5135-680522	RES, CBN 1/2P 68
360	R622	5135-680522	RES, CBN 1/2P 68
349	R623	5135-105522	RES, CBN 1/2P 1M
349	R624	5135-105522	RES, CBN 1/2P 1M
349	R625	5135-105522	RES, CBN 1/2P 1M
349	R626	5135-105522	RES, CBN 1/2P 1M
351	R627	5135-334522	RES, CBN 1/2P 330K
351	R628	5135-334522	RES, CBN 1/2P 330K
351	R629	5135-334522	RES, CBN 1/2P 330K
351	R630	5135-334522	RES, CBN 1/2P 330K
364	R631	5174-331381	RES, MTL 1/4P 330
364	R632	5174-331381	RES, MTL 1/4P 330
362	R633	5135-102522	RES, CBN 1/2P 1K
362	R634	5135-102522	RES, CBN 1/2P 1K
362	R635	5135-102522	RES, CBN 1/2P 1K
362	R636	5135-102522	RES, CBN 1/2P 1K
354	R637	5135-102522	RES, CBN 1/2P 1K
354	R638	5135-102522	RES, CBN 1/2P 1K
367	R639	5174-394381	RES, MTL 1/4P 390K
367	R640	5174-394381	RES, MTL 1/4P 390K
365	R643	5174-223381	RES, MTL 1/4P 22K
365	R644	5174-223381	RES, MTL 1/4P 22K
369	R645	5174-221381	RES, MTL 1/4P 220
369	R646	5174-221381	RES, MTL 1/4P 220
369	R647	5174-221381	RES, MTL 1/4P 220
369	R648	5174-221381	RES, MTL 1/4P 220
346	R649	5135-683522	RES, CBN 1/2P 68K
346	R650	5135-683522	RES, CBN 1/2P 68K
347	R651	5135-333522	RES, CBN 1/2P 33K
347	R652	5135-333522	RES, CBN 1/2P 33K
348	R653	5135-101522	RES, CBN 1/2P 100
348	R654	5135-101522	RES, CBN 1/2P 100
348	R655	5135-101522	RES, CBN 1/2P 100
348	R656	5135-101522	RES, CBN 1/2P 100
355	R657	5135-182522	RES, CBN 1/2P 1.8K
355	R658	5135-182522	RES, CBN 1/2P 1.8K
354	R659	5135-102522	RES, CBN 1/2P 1K
354	R660	5135-102522	RES, CBN 1/2P 1K
356	R661	5135-470522	RES, CBN 1/2P 47
356	R662	5135-470522	RES, CBN 1/2P 47
356	R663	5135-470522	RES, CBN 1/2P 47
356	R664	5135-470522	RES, CBN 1/2P 47
361	R665	5135-331522	RES, CBN 1/2P 330
361	R666	5135-331522	RES, CBN 1/2P 330
358	R669	5135-104522	RES, CBN 1/2P 100K
358	R670	5135-104522	RES, CBN 1/2P 100K
348	R673	5135-101522	RES, CBN 1/2P 100
348	R674	5135-101522	RES, CBN 1/2P 100
348	R675	5135-101522	RES, CBN 1/2P 100
348	R676	5135-101522	RES, CBN 1/2P 100
394	R677	5135-182522	RES, CBN 1/2P 1.8K
394	R678	5135-182522	RES, CBN 1/2P 1.8K
395	R691	5135-102522	RES, CBN 1/2P 1K
395	R692	5135-102522	RES, CBN 1/2P 1K
398	⚠R693	5102-1005116	RES, FUSE 10
398	⚠R694	5102-1005116	RES, FUSE 10
301	R701	5135-1R0522	RES, CBN 1/2P 1 (IB)
301A	R701	5135-5R6522	RES, CBN 1/2P 5.6 (G) (GB)
301	R702	5135-1R0522	RES, CBN 1/2P 1 (IB)

Ser. No.	Ref. No.	Part No.	Description
301A	R702	5135-5R6522	RES, CBN 1/2P 5.6 (G) (GB)
302	R703	5135-560522	RES, CBN 1/2P 56
302	R704	5135-560522	RES, CBN 1/2P 56
308	R705	5174-471381	RES, MTL 1/4P 470
308	R706	5174-471381	RES, MTL 1/4P 470
308	R707	5174-471381	RES, MTL 1/4P 470
308	R708	5174-471381	RES, MTL 1/4P 470
303	R709	5135-332522	RES, CBN 1/2P 3.3K
303	R710	5135-332522	RES, CBN 1/2P 3.3K
303	R711	5135-332522	RES, CBN 1/2P 3.3K
303	R712	5135-332522	RES, CBN 1/2P 3.3K
310	R713	5174-390381	RES, MTL 1/4P 39
310	R714	5174-390381	RES, MTL 1/4P 39
309	R715	5174-911381	RES, MTL 1/4P 910
309	R716	5174-911381	RES, MTL 1/4P 910
304	R717	5135-820522	RES, CBN 1/2P 82
304	R718	5135-820522	RES, CBN 1/2P 82
304	R719	5135-820522	RES, CBN 1/2P 82
304	R720	5135-820522	RES, CBN 1/2P 82
305	R723	5135-562522	RES, CBN 1/2P 5.6K
305	R724	5135-562522	RES, CBN 1/2P 5.6K
306	R725	5135-331522	RES, CBN 1/2P 330
306	R726	5135-331522	RES, CBN 1/2P 330
318	⚠R727	5102-1005116	RES, FUSE 10
318	⚠R728	5102-1005116	RES, FUSE 10
		TRANSISTORS	
322	Q601	5616-2SK170BL	FET, N-CH
322	Q602	5616-2SK170BL	FET, N-CH
321	Q603	5615-2SJ74(BL	FET, P-CH
321	Q604	5615-2SJ74(BL	FET, P-CH
326	Q605	5613-1844(E)	XISTOR, NPN R
326	Q606	5613-1844(E)	XISTOR, NPN R
325	Q607	5611-991(E)	XISTOR, PNP R
325	Q608	5611-991(E)	XISTOR, PNP R
323	Q609	5611-999L(F)	XISTOR, PNP R
323	Q610	5611-999L(F)	XISTOR, PNP R
324	Q611	5613-2320L(F)	XISTOR, NPN R
324	Q612	5613-2320L(F)	XISTOR, NPN R
323	Q613	5611-999L(F)	XISTOR, PNP R
323	Q614	5611-999L(F)	XISTOR, PNP R
324	Q615	5613-2320L(F)	XISTOR, NPN R
324	Q616	5613-2320L(F)	XISTOR, NPN R
327	Q617	5612-646A(C)	XISTOR, PNP A
327	Q618	5612-646A(C)	XISTOR, PNP A
328	Q619	5614-666A(C)	XISTOR, NPN A
328	Q620	5614-666A(C)	XISTOR, NPN A
324	Q625	5613-2320L(F)	XISTOR, NPN R
324	Q626	5613-2320L(F)	XISTOR, NPN R
328	Q627	5614-666A(C)	XISTOR, NPN A
328	Q628	5614-666A(C)	XISTOR, NPN A
327	Q629	5612-646A(C)	XISTOR, PNP A
327	Q630	5612-646A(C)	XISTOR, PNP A
384	Q635	5612-941(P)	XISTOR, PNP A
385	Q636	5614-1266(P)	XISTOR, NPN A
387	Q637	5613-2320L(F)	XISTOR, NPN R
386	Q638	5611-999L(F)	XISTOR, PNP R
292	Q701	5613-1844(E)	XISTOR, NPN R
292	Q702	5613-1844(E)	XISTOR, NPN R
292	Q703	5613-1844(E)	XISTOR, NPN R
292	Q704	5613-1844(E)	XISTOR, NPN R
291	Q705	5611-991(E)	XISTOR, PNP R
291	Q706	5611-991(E)	XISTOR, PNP R
291	Q707	5611-991(E)	XISTOR, PNP R
291	Q708	5611-991(E)	XISTOR, PNP R
293	Q709	5611-999L(F)	XISTOR, PNP R
293	Q710	5611-999L(F)	XISTOR, PNP R
294	Q711	5613-2320L(F)	XISTOR, NPN R
294	Q712	5613-2320L(F)	XISTOR, NPN R
315	Q713	5614-667A(C)	XISTOR, NPN A
314	Q714	5612-647A(C)	XISTOR, PNP A
316	Q715	5616-SK246GR2	FET, N-CH
316	Q716	5616-SK246GR2	FET, N-CH
		DIODES	
389	D601	5635-HZ24-1L	DIODE, ZENER
389	D602	5635-HZ24-1L	DIODE, ZENER
372	D603	5631-1S2473	DIODE, DET
372	D604	5631-1S2473	DIODE, DET
372	D605	5631-1S2473	DIODE, DET
372	D606	5631-1S2473	DIODE, DET
317	D701	5635-HZ15-2L	DIODE, ZENER
317	D702	5635-HZ15-2L	DIODE, ZENER
		CONTROLS	
343	VR601	5101-S0401202	RES, SEMI FIX 2K, PHONO DRIVER
343	VR602	5101-S0401202	RES, SEMI FIX 2K, PHONO DRIVER
		MISCELLANEOUS	
793	CN701	4443-030185	CONNECTOR
792	CW701	4163-S0203551	CONNECTOR W/W
795	CW702	4163-0109040	CONNECTOR W/W
065A	L701	5597-3	CORE, BEADS (G) (GB)
065A	L702	5597-3	CORE, BEADS (G) (GB)
065A	L703	5597-3	CORE, BEADS (G) (GB)
065A	L704	5597-3	CORE, BEADS (G) (GB)
658	PJ1	4489-03001004	PIN JACK, MLT, PHONO MM/MC
910	SW701	4431-S0315102	SWITCH, PUSH, CARTRIDGE
794	TP701	4443-027114	CONNECTOR
794	TP702	4443-027114	CONNECTOR

PCB-2 TONE P.C. BOARD

Ser. No.	Ref. No.	Part No.	Description
		CAPACITORS	
880	C501	5359-1015851	CAP, PPP 100p
880	C502	5359-1015851	CAP, PPP 100p
811	C503	5345-S19CM106	CAP, MINI ELE 10μ/16V
811	C504	5345-S19CM106	CAP, MINI ELE 10μ/16V
807	C505	5345-S19BM107	CAP, MINI ELE 100μ/10V
807	C506	5345-S19BM107	CAP, MINI ELE 100μ/10V
814	C507	5353-020934	CAP, MCA 2p
814	C508	5353-020934	CAP, MCA 2p
809	C513	5345-S19CM476	CAP, MINI ELE 47μ/16V
809	C514	5345-S19CM476	CAP, MINI ELE 47μ/16V
810	C515	5345-S19DM226	CAP, MINI ELE 22μ/25V
810	C516	5345-S19DM226	CAP, MINI ELE 22μ/25V
818	C517	5354-273J1HM	CAP, MYL .027μ
818	C518	5354-273J1HM	CAP, MYL .027μ
816	C519	5354-154593	CAP, MYL .15μ
816	C520	5354-154593	CAP, MYL .15μ
819	C521	5354-682J1HM	CAP, MYL 6800p
819	C522	5354-682J1HM	CAP, MYL 6800p
817	C523	5354-393J1HM	CAP, MYL .039μ
817	C524	5354-393J1HM	CAP, MYL .039μ
812	C525	5345-227F045	CAP, MINI ELE 220μ/50V
812	C526	5345-227F045	CAP, MINI ELE 220μ/50V
879	C527	5354-394593	CAP, MYL .39μ
879	C528	5354-394593	CAP, MYL .39μ
881	C529	5359-S010J102	CAP, PPP 1000p
844	C531	5359-3315851	CAP, PPP 330p
844	C532	5359-3315851	CAP, PPP 330p
838	C561	5345-S19CM106	CAP, MINI ELE 10μ/16V
838	C562	5345-S19CM106	CAP, MINI ELE 10μ/16V
837	C563	5345-107C041	CAP, MINI ELE 100μ/16V
837	C564	5345-107C041	CAP, MINI ELE 100μ/16V
841	C565	5354-104593	CAP, MYL .1μ
841	C566	5354-104593	CAP, MYL .1μ
841	C567	5354-104593	CAP, MYL .1μ
841	C568	5354-104593	CAP, MYL .1μ
843	C569	5353-050934	CAP, MCA 5p
843	C570	5353-050934	CAP, MCA 5p
839	C571	5345-S19FM225	CAP, MINI ELE 2.2μ/50V
839	C572	5345-S19FM225	CAP, MINI ELE 2.2μ/50V
836	C573	5345-227F045	CAP, MINI ELE 220μ/50V
836	C574	5345-227F045	CAP, MINI ELE 220μ/50V
869	C901	5345-227F045	CAP, MINI ELE 220μ/50V
869	C902	5345-227F045	CAP, MINI ELE 220μ/50V
870	C903	5345-476F041	CAP, MINI ELE 47μ/50V
870	C904	5345-476F041	CAP, MINI ELE 47μ/50V
878	C914	5345-S19CM106	CAP, MINI ELE 10μ/16V
878	C915	5345-S19CM106	CAP, MINI ELE 10μ/16V
878	C916	5345-S19CM106	CAP, MINI ELE 10μ/16V
		RESISTORS	
886	R501	5135-331522	RES, CBN 1/2P 330
886	R502	5135-331522	RES, CBN 1/2P 330
821	R505	5135-274522	RES, CBN 1/2P 270K
821	R506	5135-274522	RES, CBN 1/2P 270K
828	R507	5135-331522	RES, CBN 1/2P 330

Ser. No.	Ref. No.	Part No.	Description
828	R508	5135-331522	RES, CBN 1/2P 330
826	R509	5135-182522	RES, CBN 1/2P 1.8K
826	R510	5135-182522	RES, CBN 1/2P 1.8K
826	R511	5135-182522	RES, CBN 1/2P 1.8K
826	R512	5135-182522	RES, CBN 1/2P 1.8K
829	R513	5135-271522	RES, CBN 1/2P 270
829	R514	5135-271522	RES, CBN 1/2P 270
829	R515	5135-271522	RES, CBN 1/2P 270
829	R516	5135-271522	RES, CBN 1/2P 270
824	R517	5135-103522	RES, CBN 1/2P 10K
824	R518	5135-103522	RES, CBN 1/2P 10K
826	R519	5135-182522	RES, CBN 1/2P 1.8K
826	R520	5135-182522	RES, CBN 1/2P 1.8K
826	R521	5135-182522	RES, CBN 1/2P 1.8K
826	R522	5135-182522	RES, CBN 1/2P 1.8K
829	R523	5135-271522	RES, CBN 1/2P 270
829	R524	5135-271522	RES, CBN 1/2P 270
829	R525	5135-271522	RES, CBN 1/2P 270
829	R526	5135-271522	RES, CBN 1/2P 270
824	R527	5135-103522	RES, CBN 1/2P 10K
824	R528	5135-103522	RES, CBN 1/2P 10K
828	R529	5135-331522	RES, CBN 1/2P 330
828	R530	5135-331522	RES, CBN 1/2P 330
830	R531	5135-682522	RES, CBN 1/2P 6.8K
830	R532	5135-682522	RES, CBN 1/2P 6.8K
821	R533	5135-274522	RES, CBN 1/2P 270K
821	R534	5135-274522	RES, CBN 1/2P 270K
822	R535	5135-473522	RES, CBN 1/2P 47K
822	R536	5135-473522	RES, CBN 1/2P 47K
823	R537	5135-153522	RES, CBN 1/2P 15K
823	R538	5135-153522	RES, CBN 1/2P 15K
825	R539	5135-272522	RES, CBN 1/2P 2.7K
825	R540	5135-272522	RES, CBN 1/2P 2.7K
823	R541	5135-153522	RES, CBN 1/2P 15K
823	R542	5135-153522	RES, CBN 1/2P 15K
825	R543	5135-272522	RES, CBN 1/2P 2.7K
825	R544	5135-272522	RES, CBN 1/2P 2.7K
827	R545	5135-122522	RES, CBN 1/2P 1.2K
827	R546	5135-122522	RES, CBN 1/2P 1.2K
815	R547	5135-121522	RES, CBN 1/2P 120
815	R548	5135-121522	RES, CBN 1/2P 120
828	R549	5135-331522	RES, CBN 1/2P 330
828	R550	5135-331522	RES, CBN 1/2P 330
828	R551	5135-331522	RES, CBN 1/2P 330
828	R552	5135-331522	RES, CBN 1/2P 330
820	⚠R553	5102-2R25116	RES, FUSE 2.2
820	⚠R554	5102-2R25116	RES, FUSE 2.2
830	R555	5135-682522	RES, CBN 1/2P 6.8K
830	R556	5135-682522	RES, CBN 1/2P 6.8K
848	R557	5135-153522	RES, CBN 1/2P 15K
848	R558	5135-153522	RES, CBN 1/2P 15K
828	R559	5135-331522	RES, CBN 1/2P 330
828	R560	5135-331522	RES, CBN 1/2P 330
846	R561	5135-104522	RES, CBN 1/2P 100K
846	R562	5135-104522	RES, CBN 1/2P 100K
852	R563	5135-682522	RES, CBN 1/2P 6.8K
852	R564	5135-682522	RES, CBN 1/2P 6.8K
848	R567	5135-153522	RES, CBN 1/2P 15K
848	R568	5135-153522	RES, CBN 1/2P 15K
858	R569	5135-102522	RES, CBN 1/2P 1K
858	R570	5135-102522	RES, CBN 1/2P 1K
851	R571	5135-122522	RES, CBN 1/2P 1.2K
851	R572	5135-122522	RES, CBN 1/2P 1.2K
852	R573	5135-682522	RES, CBN 1/2P 6.8K
852	R574	5135-682522	RES, CBN 1/2P 6.8K
847	R575	5135-273522	RES, CBN 1/2P 27K
847	R576	5135-273522	RES, CBN 1/2P 27K
848	R577	5135-153522	RES, CBN 1/2P 15K
848	R578	5135-153522	RES, CBN 1/2P 15K
854	R579	5135-272522	RES, CBN 1/2P 2.7K
854	R580	5135-272522	RES, CBN 1/2P 2.7K
857	R581	5135-101522	RES, CBN 1/2P 100
857	R582	5135-101522	RES, CBN 1/2P 100
854	R583	5135-272522	RES, CBN 1/2P 2.7K
854	R584	5135-272522	RES, CBN 1/2P 2.7K
848	R585	5135-153522	RES, CBN 1/2P 15K
848	R586	5135-153522	RES, CBN 1/2P 15K
855	R587	5135-471522	RES, CBN 1/2P 470
855	R588	5135-471522	RES, CBN 1/2P 470
850	R589	5232-682J16P	RES, CBN 1/6P 6.8K
852	R590	5135-682522	RES, CBN 1/2P 6.8K
840	R591	5232-331J16P	RES, CBN 1/6P 330
856	R592	5135-331522	RES, CBN 1/2P 330
846	R593	5135-104522	RES, CBN 1/2P 100K
846	R594	5135-104522	RES, CBN 1/2P 100K
859	⚠R595	5102-2205116	RES, FUSE 22
859	⚠R596	5102-2205116	RES, FUSE 22
845	R597	5135-224522	RES, CBN 1/2P 220K
845	R598	5135-224522	RES, CBN 1/2P 220K
840	R599	5232-331J16P	RES, CBN 1/6P 330
840	R600	5232-331J16P	RES, CBN 1/6P 330
876	⚠R901	5102-2R25116	RES, FUSE 2.2
876	⚠R902	5102-2R25116	RES, FUSE 2.2
873	R903	5135-331522	RES, CBN 1/2P 330
873	R904	5135-331522	RES, CBN 1/2P 330
872	R905	5135-222522	RES, CBN 1/2P 2.2K
872	R906	5135-222522	RES, CBN 1/2P 2.2K
877	⚠R907	5102-1005116	RES, FUSE 10
877	⚠R908	5102-1005116	RES, FUSE 10
875	R910	5135-220522	RES, CBN 1/2P 22
883	R911	5135-333522	RES, CBN 1/2P 33K
884	R912	5135-682522	RES, CBN 1/2P 6.8K
887	R913	5135-331522	RES, CBN 1/2P 330
887	R914	5135-331522	RES, CBN 1/2P 330
885	R916	5135-223522	RES, CBN 1/2P 22K
874	R917	5135-101522	RES, CBN 1/2P 100
874	R918	5135-101522	RES, CBN 1/2P 100
883	R926	5135-333522	RES, CBN 1/2P 33K
888	R931	5135-105522	RES, CBN 1/2P 1M
888	R932	5135-105522	RES, CBN 1/2P 1M
871	R933	5135-394522	RES, CBN 1/2P 390K
871	R934	5135-394522	RES, CBN 1/2P 390K
849	R935	5232-220J16P	RES, CBN 1/6P 22
828	R941	5135-331522	RES, CBN 1/2P 330
828	R942	5135-331522	RES, CBN 1/2P 330
		TRANSISTORS	
801	Q501	5613-2240(BL)	XISTOR, NPN R
801	Q502	5613-2240(BL)	XISTOR, NPN R
801	Q503	5613-2240(BL)	XISTOR, NPN R
801	Q504	5613-2240(BL)	XISTOR, NPN R
802	Q505	5611-970(BL)	XISTOR, PNP R
802	Q506	5611-970(BL)	XISTOR, PNP R
802	Q507	5611-970(BL)	XISTOR, PNP R
802	Q508	5611-970(BL)	XISTOR, PNP R
803	Q509	5613-2320L(F)	XISTOR, NPN R
803	Q510	5613-2320L(F)	XISTOR, NPN R
804	Q511	5611-999L(F)	XISTOR, PNP R
804	Q512	5611-999L(F)	XISTOR, PNP R
806	Q513	5612-646A(C)	XISTOR, PNP A
806	Q514	5612-646A(C)	XISTOR, PNP A
805	Q515	5614-666A(C)	XISTOR, NPN A
805	Q516	5614-666A(C)	XISTOR, NPN A
866	Q517	5616-2SK364BL	FET,N-CH
866	Q518	5616-2SK364BL	FET,N-CH
833	Q561	5613-2320L(F)	XISTOR, NPN R
833	Q562	5613-2320L(F)	XISTOR, NPN R
834	Q563	5611-999L(F)	XISTOR, PNP R
834	Q564	5611-999L(F)	XISTOR, PNP R
832	Q565	5611-970(BL)	XISTOR, PNP R
832	Q566	5611-970(BL)	XISTOR, PNP R
831	Q567	5613-2240(BL)	XISTOR, NPN R
831	Q568	5613-2240(BL)	XISTOR, NPN R
833	Q569	5613-2320L(F)	XISTOR, NPN R
833	Q570	5613-2320L(F)	XISTOR, NPN R
862	Q901	5612-941(Q)	XISTOR, PNP A
861	Q902	5614-1266(Q)	XISTOR, NPN A
863	Q903	5613-2320L(F)	XISTOR, NPN R
864	Q904	5611-999L(F)	XISTOR, PNP R
865	Q911	5611-RN2203	XISTOR, PNP R
865	Q912	5611-RN2203	XISTOR, PNP R
863	Q913	5613-2320L(F)	XISTOR, NPN R
863	Q914	5613-2320L(F)	XISTOR, NPN R
		DIODES	
868	D501	5631-1S2473	DIODE, DET

Ser. No.	Ref. No.	Part No.	Description
868	D502	5631-1S2473	DIODE, DET
867	D901	5635-HZ24-1L	DIODE, ZENER
867	D902	5635-HZ24-1L	DIODE, ZENER
908	D914	5637-LT3E47L	LED, PHASE CORRECT LOUDNESS
908	D915	5637-LT3E47L	LED, SUBSONIC
908	D916	5637-LT3E47L	LED, TONE DEFEAT
		CONTROLS	
898	VR501 /502	5113-S0901503	RES, V CBN 16 50K, BALANCE
902	VR505 /506	5113-S0903104	RES, V CBN 16 100K, BASS
900	VR507 /508	5113-S0902503	RES, V CBN 16 50K, TREBLE
		MISCELLANEOUS	
774	CN503	4443-0701141	CONNECTOR
777	CN504	4443-0501141	CONNECTOR
778	CN505	4443-1001141	CONNECTOR
798	CN510	4443-0301141	CONNECTOR
787	CW504	4163-S0204351	CONNECTOR W/W
788	CW505	4163-S0203301	CONNECTOR W/W
790	CW506	4163-0150039	CONNECTOR W/W
791	CW507	4163-0140020	CONNECTOR W/W
772	CW508	4163-S0202501	CONNECTOR W/W
796	CW703	4163-0160039	CONNECTOR W/W
780	CW803	4163-0155020	CONNECTOR W/W
781	CW804	4163-0150020	CONNECTOR W/W
882	RC802	5212-104J0401	R COMPOSITE 100K
891	SW501	4411-00303205	SWITCH, ROTARY, SOURCE
891	SW502	4411-00303205	SWITCH, ROTARY, RECORD OUT
893	SW503	4411-00304203	SWITCH, ROTARY, TAPE MONITOR
906	SW504	4431-S1303210	SWITCH, PUSH, TONE DEFEAT
906	SW505	4431-S1303210	SWITCH, PUSH, SUBSONIC
905	SW506	4431-S1306106	SWITCH, PUSH, PHASE CORRECT LOUDNESS

PCB-3 CONTROL P.C. BOARD

		CAPACITORS	
068A	C71	5359-3315851	CAP, PPP 330p G GB
068A	C72	5359-3315851	CAP, PPP 330p G GB
068A	C73	5359-3315851	CAP, PPP 330p G GB
068A	C74	5359-3315851	CAP, PPP 330p G GB
068A	C75	5359-3315851	CAP, PPP 330p G GB
068A	C76	5359-3315851	CAP, PPP 330p G GB
068A	C77	5359-3315851	CAP, PPP 330p G GB
068A	C78	5359-3315851	CAP, PPP 330p G GB
946	C801	5359-S010J102	CAP, PPP 1000p
946	C802	5359-S010J102	CAP, PPP 1000p
946	C803	5359-S010J102	CAP, PPP 1000p
946	C804	5359-S010J102	CAP, PPP 1000p
947	C805	5354-104593	CAP, MYL .1
947	C806	5354-104593	CAP, MYL .1
947	C807	5354-104593	CAP, MYL .1
944	C808	5345-S19DM106	CAP, MINI ELE 10μ/25V
940	C809	5345-S19DM106	CAP, MINI ELE 10μ/25V
945	C811	5345-S19FM104	CAP, MINI ELE .1μ/50V
647	C812	5345-107D041	CAP, MINI ELE 100μ/25V
647	C813	5345-107D041	CAP, MINI ELE 100μ/25V
647	C814	5345-107D041	CAP, MINI ELE 100μ/25V
647	C815	5345-107D041	CAP, MINI ELE 100μ/25V
944	C816	5345-S19DM106	CAP, MINI ELE 10μ/25V
944	C817	5345-S19DM106	CAP, MINI ELE 10μ/25V
665	C863	5361-103KB	CAP, CER .01μ
665	C864	5361-103KB	CAP, CER .01μ
665	C865	5361-103KB	CAP, CER .01μ
665	C868	5361-103KB	CAP, CER .01μ
		RESISTORS	
959	R801	5135-102522	RES, CBN 1/2P 1K
959	R802	5135-102522	RES, CBN 1/2P 1K
959	R803	5135-102522	RES, CBN 1/2P 1K
959	R804	5135-102522	RES, CBN 1/2P 1K
959	R805	5135-102522	RES, CBN 1/2P 1K
959	R806	5135-102522	RES, CBN 1/2P 1K
959	R807	5135-102522	RES, CBN 1/2P 1K
959	R808	5135-102522	RES, CBN 1/2P 1K
959	R809	5135-102522	RES, CBN 1/2P 1K
959	R810	5135-102522	RES, CBN 1/2P 1K
959	R811	5135-102522	RES, CBN 1/2P 1K
959	R812	5135-102522	RES, CBN 1/2P 1K
959	R813	5135-102522	RES, CBN 1/2P 1K
959	R814	5135-102522	RES, CBN 1/2P 1K
959	R815	5135-102522	RES, CBN 1/2P 1K
959	R816	5135-102522	RES, CBN 1/2P 1K
959	R817	5135-102522	RES, CBN 1/2P 1K
959	R818	5135-102522	RES, CBN 1/2P 1K
959	R819	5135-102522	RES, CBN 1/2P 1K
959	R820	5135-102522	RES, CBN 1/2P 1K
959	R821	5135-102522	RES, CBN 1/2P 1K
959	R822	5135-102522	RES, CBN 1/2P 1K
959	R823	5135-102522	RES, CBN 1/2P 1K
959	R824	5135-102522	RES, CBN 1/2P 1K
964	R825	5232-224J16P	RES, CBN 1/6P 220K
964	R826	5232-224J16P	RES, CBN 1/6P 220K
964	R827	5232-224J16P	RES, CBN 1/6P 220K
975	R828	5232-124J16P	RES, CBN 1/6P 120K
963	R829	5232-105J16P	RES, CBN 1/6P 1M
963	R830	5232-105J16P	RES, CBN 1/6P 1M
963	R831	5232-105J16P	RES, CBN 1/6P 1M
963	R832	5232-105J16P	RES, CBN 1/6P 1M
963	R833	5232-105J16P	RES, CBN 1/6P 1M
963	R834	5232-105J16P	RES, CBN 1/6P 1M
963	R835	5232-105J16P	RES, CBN 1/6P 1M
965	R836	5232-104J16P	RES, CBN 1/6P 100K
965	R837	5232-104J16P	RES, CBN 1/6P 100K
965	R838	5232-104J16P	RES, CBN 1/6P 100K
649	⚠R839	5102-2205116	RES, FUSE 22
650	R840	5135-272522	RES, CBN 1/2P 2.7K
650	R841	5135-272522	RES, CBN 1/2P 2.7K
649	⚠R842	5102-2205116	RES, FUSE 22
962	R843	5135-223522	RES, CBN 1/2P 22K
070A	R851	5232-102J16P	RES, CBN 1/6P 1K G GB
070A	R852	5232-102J16P	RES, CBN 1/6P 1K G GB
070A	R853	5232-102J16P	RES, CBN 1/6P 1K G GB
070A	R854	5232-102J16P	RES, CBN 1/6P 1K G GB
966	R855	5232-100J16P	RES, CBN 1/6P 10
070A	R856	5232-102J16P	RES, CBN 1/6P 1K G GB
070A	R857	5232-102J16P	RES, CBN 1/6P 1K G GB
070A	R858	5232-102J16P	RES, CBN 1/6P 1K G GB
973	R887	5232-223J16P	RES, CBN 1/6P 22K
		INTEGRATED CIRCUIT	
928	IC801	5654-LC7818	IC, DIGITAL
		TRANSISTORS	
936	Q801	5616-2SK246BL	FET, N-CH
936	Q802	5616-2SK246BL	FET, N-CH
936	Q803	5616-2SK246BL	FET, N-CH
936	Q804	5616-2SK246BL	FET, N-CH
935	Q805	5616-2SK364(V	FET, N-CH
935	Q806	5616-2SK364(V	FET, N-CH
935	Q807	5616-2SK364(V	FET, N-CH
935	Q808	5616-2SK364(V	FET, N-CH
936	Q809	5616-2SK246BL	FET, N-CH
936	Q810	5616-2SK246BL	FET, N-CH
936	Q811	5616-2SK246BL	FET, N-CH
936	Q812	5616-2SK246BL	FET, N-CH
935	Q813	5616-2SK364(V	FET, N-CH
935	Q814	5616-2SK364(V	FET, N-CH
936	Q815	5616-2SK246BL	FET, N-CH
936	Q816	5616-2SK246BL	FET, N-CH
936	Q817	5616-2SK246BL	FET, N-CH
936	Q818	5616-2SK246BL	FET, N-CH
645	Q819	5614-667A(C)	XISTOR, NPN A
644	Q820	5612-647A(C)	XISTOR, PNP A
933	Q861	5611-933S(S)	XISTOR, PNP R
		DIODES	
939	D801	5631-1SS133	DIODE, DET
939	D802	5631-1SS133	DIODE, DET
939	D803	5631-1SS133	DIODE, DET
939	D804	5631-1SS133	DIODE, DET
939	D805	5631-1SS133	DIODE, DET
939	D806	5631-1SS133	DIODE, DET
939	D807	5631-1SS133	DIODE, DET
939	D808	5631-1SS133	DIODE, DET
939	D809	5631-1SS133	DIODE, DET
939	D810	5631-1SS133	DIODE, DET

Ser. No.	Ref. No.	Part No.	Description
939	D811	5631-1SS133	DIODE, DET
939	D812	5631-1SS133	DIODE, DET
939	D813	5631-1SS133	DIODE, DET
939	D814	5631-1SS133	DIODE, DET
939	D815	5631-1SS133	DIODE, DET
939	D816	5631-1SS133	DIODE, DET
939	D817	5631-1SS133	DIODE, DET
939	D818	5631-1SS133	DIODE, DET
939	D819	5631-1SS133	DIODE, DET
939	D820	5631-1SS133	DIODE, DET
646	D821	5635-HZ20-1L	DIODE, ZENER
646	D822	5635-HZ20-1L	DIODE, ZENER
		MISCELLANEOUS	
779	CN502	4443-030185	CONNECTOR
773	CW802	4163-S0203901	CONNECTOR W/W
783	CW805	4163-S0207551	CONNECTOR W/W
784	CW806	4163-S0205451	CONNECTOR W/W
785	CW807	4163-S0210401	CONNECTOR W/W
659	PJ3	4489-02901004	PIN JACK, MLT, TUNER/CD
659	PJ4	4489-02901004	PIN JACK, MLT, VIDEO/AUX
659	PJ5	4489-02901004	PIN JACK, MLT, TAPE 1 IN/OUT
659	PJ6	4489-02901004	PIN JACK, MLT, TAPE 2 IN/OUT
948	RC801	5212-223J0601	R COMPOSITE

PCB-4 DRIVER P.C. BOARD

		CAPACITORS	
482	C13	5354-332J1HM	CAP, MYL 3300p
480	C15	5354-334593	CAP, MYL .33 μ
483	C16	5345-S19CM336	CAP, MINI ELE 33 μ/16V
480	C17	5354-334593	CAP, MYL .33 μ
484	C18	5345-S19FM105	CAP, MINI ELE 1 μ/50V
485	C19	5345-105J0962	CAP, MINI ELE 1 μ/100V
476	C24	5345-226D041	CAP, MINI ELE 22 μ/25V
481	C26	5354-104593	CAP, MYL .1 μ
434	C405	5354-104593	CAP, MYL .1 μ
434	C406	5354-104593	CAP, MYL .1 μ
434	C407	5354-104593	CAP, MYL .1 μ
434	C408	5354-104593	CAP, MYL .1 μ
437A	C409	5353-100534	CAP, MCA 10p
437A	C410	5353-100534	CAP, MCA 10p
430	C413	5345-S19CM225	CAP, MINI ELE 2.2 μ/16V
430	C414	5345-S19CM225	CAP, MINI ELE 2.2 μ/16V
429	C415	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C416	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C417	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C418	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C419	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C420	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C421	5345-227D041	CAP, MINI ELE 220 μ/25V
429	C422	5345-227D041	CAP, MINI ELE 220 μ/25V
431	C423	5345-477J0962	CAP, MINI ELE 470 μ/100V
431	C424	5345-477J0962	CAP, MINI ELE 470 μ/100V
431	C425	5345-477J0962	CAP, MINI ELE 470 μ/100V
431	C426	5345-477J0962	CAP, MINI ELE 470 μ/100V
438	C431	5359-8205851	CAP, PPP 82p
438	C432	5359-8205851	CAP, PPP 82p
438	C433	5359-8205851	CAP, PPP 82p
438	C434	5359-8205851	CAP, PPP 82p
436	C435	5353-680534	CAP, MCA 68p
436	C436	5353-680534	CAP, MCA 68p
437A	C437	5353-100534	CAP, MCA 10p
437A	C438	5353-100534	CAP, MCA 10p
433	C469	5345-S19CM106	CAP, MINI ELE 10 μ/16V
433	C470	5345-S19CM106	CAP, MINI ELE 10 μ/16V
		RESISTORS	
495	R1	5135-473522	RES, CBN 1/2P 47K
488	R2	5135-223522	RES, CBN 1/2P 22K
497	R3	5135-152522	RES, CBN 1/2P 1.5K
500	R7	5135-104522	RES, CBN 1/2P 100K
495	R8	5135-473522	RES, CBN 1/2P 47K
496	R9	5135-334522	RES, CBN 1/2P 330K
494	R10	5135-684522	RES, CBN 1/2P 680K
493	R11	5135-184522	RES, CBN 1/2P 180K
492	R12	5135-225522	RES, CBN 1/2P 2.2M
490	R13	5135-104522	RES, CBN 1/2P 100K
490	R14	5135-104522	RES, CBN 1/2P 100K
491	R15	5135-103522	RES, CBN 1/2P 10K
491	R16	5135-103522	RES, CBN 1/2P 10K
495	R17	5135-473522	RES, CBN 1/2P 47K
488	R18	5135-223522	RES, CBN 1/2P 22K
488	R19	5135-223522	RES, CBN 1/2P 22K
495	R20	5135-473522	RES, CBN 1/2P 47K
490	R21	5135-104522	RES, CBN 1/2P 100K
487	R25	5135-105522	RES, CBN 1/2P 1M
487	R26	5135-105522	RES, CBN 1/2P 1M
488	R27	5135-223522	RES, CBN 1/2P 22K
486	⚠R34	5102-1015116	RES, FUSE 100
460	R401	5135-102522	RES, CBN 1/2P 1K
460	R402	5135-102522	RES, CBN 1/2P 1K
451	R403	5135-273522	RES, CBN 1/2P 27K
451	R404	5135-273522	RES, CBN 1/2P 27K
457	R405	5135-151522	RES, CBN 1/2P 150
457	R406	5135-151522	RES, CBN 1/2P 150
459	R407	5135-330522	RES, CBN 1/2P 33
459	R408	5135-330522	RES, CBN 1/2P 33
462	R409	5135-103522	RES, CBN 1/2P 10K
462	R410	5135-103522	RES, CBN 1/2P 10K
459	R411	5135-330522	RES, CBN 1/2P 33
459	R412	5135-330522	RES, CBN 1/2P 33
456	R413	5135-221522	RES, CBN 1/2P 220
456	R414	5135-221522	RES, CBN 1/2P 220
454	R415	5135-154522	RES, CBN 1/2P 150K
454	R416	5135-154522	RES, CBN 1/2P 150K
452	R417	5135-563522	RES, CBN 1/2P 56K
452	R418	5135-563522	RES, CBN 1/2P 56K
455	R419	5135-105522	RES, CBN 1/2P 1M
455	R420	5135-105522	RES, CBN 1/2P 1M
454	R421	5135-154522	RES, CBN 1/2P 150K
454	R422	5135-154522	RES, CBN 1/2P 150K
454	R423	5135-154522	RES, CBN 1/2P 150K
454	R424	5135-154522	RES, CBN 1/2P 150K
455	R425	5135-105522	RES, CBN 1/2P 1M
455	R426	5135-105522	RES, CBN 1/2P 1M
460	R427	5135-102522	RES, CBN 1/2P 1K
460	R428	5135-102522	RES, CBN 1/2P 1K
460	R429	5135-102522	RES, CBN 1/2P 1K
460	R430	5135-102522	RES, CBN 1/2P 1K
463	R431	5135-151522	RES, CBN 1/2P 150
463	R432	5135-151522	RES, CBN 1/2P 150
448	R433	5174-390381	RES, MTL 1/4P 39
448	R434	5174-390381	RES, MTL 1/4P 39
463	R435	5135-151522	RES, CBN 1/2P 150
463	R436	5135-151522	RES, CBN 1/2P 150
461	R437	5135-331522	RES, CBN 1/2P 330
461	R438	5135-331522	RES, CBN 1/2P 330
453	R439	5135-563522	RES, CBN 1/2P 56K
453	R440	5135-563522	RES, CBN 1/2P 56K
463	R441	5135-151522	RES, CBN 1/2P 150
463	R442	5135-151522	RES, CBN 1/2P 150
453	R443	5135-563522	RES, CBN 1/2P 56K
453	R444	5135-563522	RES, CBN 1/2P 56K
445	⚠R445	5102-4714713	RES, FUSE 470
445	⚠R446	5102-4714713	RES, FUSE 470
463	R447	5135-151522	RES, CBN 1/2P 150
463	R448	5135-151522	RES, CBN 1/2P 150
460	R449	5135-102522	RES, CBN 1/2P 1K
460	R450	5135-102522	RES, CBN 1/2P 1K
461	R451	5135-331522	RES, CBN 1/2P 330
461	R452	5135-331522	RES, CBN 1/2P 330
445	⚠R453	5102-4714713	RES, FUSE 470
445	⚠R454	5102-4714713	RES, FUSE 470
444	⚠R455	5102-5604713	RES, FUSE 56
444	⚠R456	5102-5604713	RES, FUSE 56
444	⚠R457	5102-5604713	RES, FUSE 56
444	⚠R458	5102-5604713	RES, FUSE 56
466	R459	5135-153522	RES, CBN 1/2P 15K
466	R460	5135-153522	RES, CBN 1/2P 15K
466	R461	5135-153522	RES, CBN 1/2P 15K
466	R462	5135-153522	RES, CBN 1/2P 15K
449	R463	5174-273381	RES, MTL 1/4P 27K
449	R464	5174-273381	RES, MTL 1/4P 27K
446	⚠R465	5102-2205116	RES, FUSE 22
446	⚠R466	5102-2205116	RES, FUSE 22

Ser. No.	Ref. No.	Part No.	Description
467	R467	5135-562522	RES, CBN 1/2P 5.6K
467	R468	5135-562522	RES, CBN 1/2P 5.6K
446	⚠R469	5102-2205116	RES, FUSE 22
446	⚠R470	5102-2205116	RES, FUSE 22
467	R471	5135-562522	RES, CBN 1/2P 5.6K
467	R472	5135-562522	RES, CBN 1/2P 5.6K
443	⚠R473	5102-1005711	RES, FUSE 10
443	⚠R474	5102-1005711	RES, FUSE 10
443	⚠R475	5102-1005711	RES, FUSE 10
443	⚠R476	5102-1005711	RES, FUSE 10
460	R477	5135-102522	RES, CBN 1/2P 1K
460	R478	5135-102522	RES, CBN 1/2P 1K
447	R767	5174-561381	RES, MTL 1/4P 560
447	R768	5174-561381	RES, MTL 1/4P 560
458	R775	5135-472522	RES, CBN 1/2P 4.7K
458	R776	5135-472522	RES, CBN 1/2P 4.7K
458	R777	5135-472522	RES, CBN 1/2P 4.7K
458	R778	5135-472522	RES, CBN 1/2P 4.7K
464	R781	5135-101522	RES, CBN 1/2P 100
464	R782	5135-101522	RES, CBN 1/2P 100
464	R783	5135-101522	RES, CBN 1/2P 100
464	R784	5135-101522	RES, CBN 1/2P 100
457	R789	5135-151522	RES, CBN 1/2P 150
457	R790	5135-151522	RES, CBN 1/2P 150
468	R943	5135-102522	RES, CBN 1/2P 1K
468	R944	5135-102522	RES, CBN 1/2P 1K
465	R945	5135-392522	RES, CBN 1/2P 3.9K
465	R946	5135-392522	RES, CBN 1/2P 3.9K
465	R947	5135-392522	RES, CBN 1/2P 3.9K
465	R948	5135-392522	RES, CBN 1/2P 3.9K
		TRANSISTORS	
475	Q1	5613-2240(BL)	XISTOR, NPN R
473	Q2	5613-2320L(F)	XISTOR, NPN R
472	Q3	5611-999L(F)	XISTOR, PNP R
473	Q4	5613-2320L(F)	XISTOR, NPN R
472	Q5	5611-999L(F)	XISTOR, PNP R
472	Q6	5611-999L(F)	XISTOR, PNP R
471	Q401	5616-2SK364BL	FET, N-CH
471	Q402	5616-2SK364BL	FET, N-CH
417	Q403	5613-2240(BL)	XISTOR, NPN R
417	Q404	5613-2240(BL)	XISTOR, NPN R
414	Q405	5613-2320L(F)	XISTOR, NPN R
414	Q406	5613-2320L(F)	XISTOR, NPN R
418	Q407	5611-970(BL)	XISTOR, PNP R
418	Q408	5611-970(BL)	XISTOR, PNP R
417	Q409	5613-2240(BL)	XISTOR, NPN R
417	Q410	5613-2240(BL)	XISTOR, NPN R
418	Q413	5611-970(BL)	XISTOR, PNP R
418	Q414	5611-970(BL)	XISTOR, PNP R
416	Q415	5614-666A(C)	XISTOR, NPN A
416	Q416	5614-666A(C)	XISTOR, NPN A
415	Q417	5612-646A(C)	XISTOR, PNP A
415	Q418	5612-646A(C)	XISTOR, PNP A
415	Q419	5612-646A(C)	XISTOR, PNP A
415	Q420	5612-646A(C)	XISTOR, PNP A
417	Q421	5613-2240(BL)	XISTOR, NPN R
417	Q422	5613-2240(BL)	XISTOR, NPN R
416	Q423	5614-666A(C)	XISTOR, NPN A
416	Q424	5614-666A(C)	XISTOR, NPN A
418	Q425	5611-970(BL)	XISTOR, PNP R
418	Q426	5611-970(BL)	XISTOR, PNP R
413	Q427	5612-647A(C)	XISTOR, PNP A
413	Q428	5612-647A(C)	XISTOR, PNP A
421	Q429	5614-667A(C)	XISTOR, NPN A
421	Q430	5614-667A(C)	XISTOR, NPN A
420	Q431	5614-668A(C)	XISTOR, NPN A
420	Q432	5614-668A(C)	XISTOR, NPN A
419	Q433	5612-648A(C)	XISTOR, PNP A
419	Q434	5612-648A(C)	XISTOR, PNP A
417	Q435	5613-2240(BL)	XISTOR, NPN R
417	Q436	5613-2240(BL)	XISTOR, NPN R
418	Q437	5611-970(BL)	XISTOR, PNP R
418	Q438	5611-970(BL)	XISTOR, PNP R
417	Q751	5613-2240(BL)	XISTOR, NPN R
417	Q752	5613-2240(BL)	XISTOR, NPN R
418	Q753	5611-970(BL)	XISTOR, PNP R
418	Q754	5611-970(BL)	XISTOR, PNP R
412	Q755	5616-2SK170BL	FET, N-CH
412	Q756	5616-2SK170BL	FET, N-CH
412	Q757	5616-2SK170BL	FET, N-CH
412	Q758	5616-2SK170BL	FET, N-CH
411	Q759	5615-2SJ74(BL	FET, P-CH
411	Q760	5615-2SJ74(BL	FET, P-CH
411	Q761	5615-2SJ74(BL	FET, P-CH
411	Q762	5615-2SJ74(BL	FET, P-CH
		DIODES	
477	D8	5635-HZ6A2L	DIODE, ZENER
478	D9	5631-1S2473	DIODE, DET
478	D10	5631-1S2473	DIODE, DET
478	D11	5631-1S2473	DIODE, DET
478	D12	5631-1S2473	DIODE, DET
478	D15	5631-1S2473	DIODE, DET
479	D16	5632-S5566B	DIODE, RECT
426	D401	5635-HZ24-2L	DIODE, ZENER
426	D402	5635-HZ24-2L	DIODE, ZENER
426	D403	5635-HZ24-2L	DIODE, ZENER
426	D404	5635-HZ24-2L	DIODE, ZENER
		CONTROLS	
441	VR401	5101-S0401102	RES, SEMI FIX 1K, MAIN DRIVER
441	VR402	5101-S0401102	RES, SEMI FIX 1K, MAIN DRIVER
		MISCELLANEOUS	
724	CN401	4443-0401140	CONNECTOR
727	CN402	4443-070185	CONNECTOR
727	CN403	4443-070185	CONNECTOR
725	CN404	4443-0201140	CONNECTOR
723	CN405	4443-0201140	CONNECTOR
729	TM401	4214-11012	TERMINAL
729	TM402	4214-11012	TERMINAL

PCB-5 MAIN LCH P.C. BOARD

		CAPACITORS	
534	C455	5353-470534	CAP, MCA 47p
534	C457	5353-470534	CAP, MCA 47p
691	C459	5354-104593	CAP, MYL .1 μ
541	C465	5354-104593	CAP, MYL .1 μ
541	C467	5354-104593	CAP, MYL .1 μ
		RESISTORS	
549	R479	5135-100522	RES, CBN 1/2P 10
518	R481	5272-S010KR15	RES, CEM 2P .15
518	R483	5272-S010KR15	RES, CEM 2P .15
518	R485	5272-S010KR15	RES, CEM 2P .15
517	R487 /489	5275-S040JR22	RES, CME 5P .22
518	R491	5272-S010KR15	RES, CEM 2P .15
517	R495 /497	5275-S040JR22	RES, CEM 5P .22
528	R743	5135-102522	RES, CBN 1/2P 1K
525	R745	5135-561522	RES, CBN 1/2P 560
693	R751	5135-562522	RES, CBN 1/2P 5.6K
693	R753	5135-562522	RES, CBN 1/2P 5.6K
694	R755	5135-272522	RES, CBN 1/2P 2.7K
531	R757	5171-100593	RES, MTL 1P 10
526	R759	5135-121522	RES, CBN 1/2P 120
532	R761	5175-100583	RES, MTL 3P 10
695	R763	5135-472J522	RES, CBN 1/2P 4.7K
527	R765	5135-150522	RES, CBN 1/2P 15
529	R769	5135-221522	RES, CBN 1/2P 220
529	R771	5135-221522	RES, CBN 1/2P 220
520	⚠R791	5102-1015116	RES, FUSE 100
520	⚠R793	5102-1015116	RES, FUSE 100
521	⚠R795	5102-1005116	RES, FUSE 10
521	⚠R797	5102-1005116	RES, FUSE 10
527	R799	5135-150522	RES, CBN 1/2P 15
549	R941	5135-100522	RES, CBN 1/2P 10
		TRANSISTORS	
505	Q453	5613-3423(Y)	XISTOR, NPN R
503	Q457	5614-668A(C)	XISTOR, NPN A
502	Q459	5612-648A(C)	XISTOR, PNP A
506	Q461	5611-1306A(Y)	XISTOR, PNP R
507	Q463	5613-3298A(Y)	XISTOR, NPN R
508	Q465	5611-1302(O)	XISTOR, PNP R
510	Q467	5613-3281(O)	XISTOR, NPN R
508	Q469	5611-1302(O)	XISTOR, PNP R

Ser. No.	Ref. No.	Part No.	Description
510	Q471	5613-3281(O)	XISTOR, NPN R
690	Q477	5611-970(BL)	XISTOR, PNP R
		DIODES	
513	D407	5631-1S2473	DIODE, DET
513	D409	5631-1S2473	DIODE, DET
514	D411	5632-10DF2	DIODE, RECT
514	D413	5632-10DF2	DIODE, RECT
		COIL	
535	L405	5991-7125	SPRING COIL
		CONTROL	
543	VR405	5101-S0401102	RES, SEMI FIX 1K, IDLING CURRENT
		MISCELLANEOUS	
739	CC401	4132-R0110121	CORD, 2C
736	CW401	4163-0140021	CONNECTOR W/W
737	CW402	4163-0140023	CONNECTOR W/W
738	CW403	4163-0140039	CONNECTOR W/W
735	CW410	4163-S0202201	CONNECTOR W/W
749	JL401	4242-R0507101	JUMPER LEAD
550	L401	5597-45502	CORE, BEADS
550	L403	5597-45502	CORE, BEADS
606	PT1	5192-00104	POSISTOR
606	PT2	5192-00104	POSISTOR
734	TP403	4443-024116	CONNECTOR

PCB-6 MAIN RCH P.C. BOARD

		CAPACITORS	
594	C456	5353-470534	CAP, MCA 47p
594	C458	5353-470534	CAP, MCA 47p
699	C460	5354-104593	CAP, MYL .1 μ
601	C466	5354-104593	CAP, MYL .1 μ
601	C468	5354-104593	CAP, MYL .1 μ
		RESISTORS	
612	R480	5135-100522	RES, CBN 1/2P 10
578	R482	5272-S010KR15	RES, CEM 2P .15
578	R484	5272-S010KR15	RES, CEM 2P .15
578	R486	5272-S010KR15	RES, CEM 2P .15
577	R488 /490	5275-S040JR22	RES, CEM 5P .22
578	R492	5272-S010KR15	RES, CEM 2P .15
577	R496 /498	5275-S040JR22	RES, CEM 5P .22
588	R744	5135-102522	RES, CBN 1/2P 1K
585	R746	5135-561522	RES, CBN 1/2P 560
701	R752	5135-562522	RES, CBN 1/2P 5.6K
701	R754	5135-562522	RES, CBN 1/2P 5.6K
702	R756	5135-272522	RES, CBN 1/2P 2.7K
591	R758	5171-100593	RES, MTL 1P 10
586	R760	5135-121522	RES, CBN 1/2P 120
592	R762	5175-100583	RES, MTL 3P 10
703	R764	5135-472522	RES, CBN 1/2P 4.7K
587	R766	5135-150522	RES, CBN 1/2P 15
589	R770	5135-221522	RES, CBN 1/2P 220
589	R772	5135-221522	RES, CBN 1/2P 220
580	⚠R792	5102-1015116	RES, FUSE 100
580	⚠R794	5102-1015116	RES, FUSE 100
581	⚠R796	5102-1005116	RES, FUSE 10
581	⚠R798	5102-1005116	RES, FUSE 10
587	R800	5135-150522	RES, CBN 1/2P 15
612	R942	5135-100522	RES, CBN 1/2P 10
		TRANSISTORS	
565	Q454	5613-3423(Y)	XISTOR, NPN R
563	Q458	5614-668A(C)	XISTOR, NPN A
562	Q460	5612-648A(C)	XISTOR, PNP A
566	Q462	5611-1306A(Y)	XISTOR, PNP R
567	Q464	5613-3298A(Y)	XISTOR, NPN R
568	Q466	5611-1302(O)	XISTOR, PNP R
570	Q468	5613-3281(O)	XISTOR, NPN R
568	Q470	5611-1302(O)	XISTOR, PNP R
570	Q472	5613-3281(O)	XISTOR, NPN R
698	Q478	5611-970(BL)	XISTOR, PNP R
		DIODES	
573	D408	5631-1S2473	DIODE, DET
573	D410	5631-1S2473	DIODE, DET
574	D412	5632-10DF2	DIODE, RECT
574	D414	5632-10DF2	DIODE, RECT
		COIL	
595	L406	5991-7125	SPRING COIL
		CONTROL	
603	VR406	5101-S0401102	RES, SEMI FIX 1K, IDLING CURRENT
		MISCELLANEOUS	
741	CC402	4132-R0110121	CORD, 2C
746	CW404	4163-0140021	CONNECTOR W/W
747	CW405	4163-0140020	CONNECTOR W/W
748	CW406	4163-0140039	CONNECTOR W/W
745	JL403	4242-R0507141	JUMPER LEAD
613	L402	5597-45502	CORE, BEADS
613	L404	5597-45502	CORE, BEADS
740	TP404	4443-024116	CONNECTOR

PCB-7 HEADPHONES P.C. BOARD

		CAPACITORS	
075A	C95	5359-3315851	CAP, PPP 330p (G) (GB)
075A	C96	5359-3315851	CAP, PPP 330p (G) (GB)
		MISCELLANEOUS	
917	J1	4451-00161	JACK, 1P, HEADPHONES

PCB-8 SPEAKER P.C. BOARD

		CAPACITORS	
069A	C83	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C84	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C85	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C86	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C87	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C88	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C89	5359-S010J271	CAP, PPP 270p (G) (GB)
069A	C90	5359-S010J271	CAP, PPP 270p (G) (GB)
		RESISTORS	
679	R737	5135-102522	RES, CBN 1/2P 1K
679	R738	5135-102522	RES, CBN 1/2P 1K
679	R739	5135-102522	RES, CBN 1/2P 1K
679	R740	5135-102522	RES, CBN 1/2P 1K
		MISCELLANEOUS	
770	JL404	4242-R0303451	JUMPER LEAD
913	SW3	4411-204715	SWITCH, ROTARY, SPEAKERS
651	SPT1	4214-221	TERMINAL, SPEAKERS

PCB-9 MAIN POWER SUPPLY P.C. BOARD

		CAPACITORS	
051A	C20	5352-1041957	CAP, MTL .1 μ (G) (GB)
683	C23	5345-475J0962	CAP, MINI ELE 4.7 μ/100V
623	⚠C31	5341-S10HM758	CAP, ELE 7500 μ/85V
623	⚠C32	5341-S10HM758	CAP, ELE 7500 μ/85V
623	⚠C33	5341-S10HM758	CAP, ELE 7500 μ/85V
623	⚠C34	5341-S10HM758	CAP, ELE 7500 μ/85V
076A	C97	5361-223ZF	CAP, CER .022 μ (G) (GB)
		RESISTORS	
685	⚠R28	5102-8205116	RES, FUSE 82
685	⚠R29	5102-8205116	RES, FUSE 82
688	R30	5171-331593	RES, MTL 1P 330
687	R31	5135-103522	RES, CBN 1/2P 10K
689	R32	5171-471593	RES, MTL 1P 470
688	R33	5171-331593	RES, MTL 1P 330
		DIODES	
621	⚠D1	5685-D5SB40	SILICON, BRIG
621	⚠D2	5685-D5SB40	SILICON, BRIG
681	⚠D13	5632-S5566B	DIODE, RECT
681	⚠D14	5632-S5566B	DIODE, RECT
		MISCELLANEOUS	
754	CW1	4163-S0202201	CONNECTOR W/W
800	CW10	4163-0135020	CONNECTOR W/W
753	TM1	4214-11023	TERMINAL
752	TM3	4214-11022	TERMINAL
752	TM4	4214-11022	TERMINAL
751	TM11	4214-11032	TERMINAL

PCB-10 POWER SWITCH P.C. BOARD

Ser. No.	Ref. No.	Part No.	Description
		CAPACITOR	
913A	⚠C1	5352-1030958	CAP, MTL .01
		RESISTOR	
054A	⚠R101	5135-335J50P	RES, CBN 1/2P 3.3M
		MISCELLANEOUS	
911	⚠SW2	4433-01101	SWITCH, PU-PW, POWER
916	TM9	4214-122	TERMINAL
916	TM10	4214-122	TERMINAL

PCB-11 SUB POWER SUPPLY P.C. BOARD

		CAPACITORS	
629	⚠C5	5345-228F0962	CAP, MINI ELE 2200μ/50V
629	⚠C6	5345-228F0962	CAP, MINI ELE 2200μ/50V
630	C11	5354-104593	CAP, MYL .1μ
630	C12	5354-104593	CAP, MYL .1μ
052A	C22	5352-1041957	CAP, MTL .1μ G GB
057A	C51	5361-223ZF	CAP, CER .022μ G GB
		DIODES	
627	⚠D3	5632-S5566B	DIODE, RECT
627	⚠D4	5632-S5566B	DIODE, RECT
627	⚠D5	5632-S5566B	DIODE, RECT
627	⚠D6	5632-S5566B	DIODE, RECT
		MISCELLANEOUS	
758	CN2	4443-0301140	CONNECTOR
758	CN3	4443-0301140	CONNECTOR
758	CN4	4443-0301140	CONNECTOR
632A	⚠F2	5732-122030	FUSE, T1.25A/250V
632A	⚠F3	5732-122030	FUSE, T1.25A/250V
633	⚠HF3	4472-0131	HOLDER, FUSE F2
633	⚠HF4	4472-0131	HOLDER, FUSE F3
633	⚠HF5	4472-0131	HOLDER, FUSE F3
633	⚠HF6	4472-0131	HOLDER, FUSE F2
756	TM5	4214-11033	TERMINAL
631	TM6	4214-11013	TERMINAL

PCB-12 VOLUME P.C. BOARD

		RESISTORS	
920	R503	5135-472522	RES, CBN 1/2P 4.7K
920	R504	5135-472522	RES, CBN 1/2P 4.7K
		CONTROLS	
896	VR503 /504	5113-10472147	RES, V CBN 16 100K, VOLUME
		MISCELLANEOUS	
768	CN511	4443-030185	CONNECTOR
761	CN512	4443-030185	CONNECTOR
765	CN513	4443-070185	CONNECTOR

PCB-13 BYPASS P.C. BOARD

		MISCELLANEOUS	
763	CN508	4443-0201140	CONNECTOR
744	JL501	4242-R0507101	JUMPER LEAD
904	SW507	4431-S2501106	SWITCH, PUSH, PREAMPLIFIER BYPASS

PCB-14 PRE/MAIN SEPARATION P.C. BOARD

		CAPACITORS	
066A	C79	5359-1015851	CAP, PPP 100p G GB
066A	C80	5359-1015851	CAP, PPP 100p G GB
066A	C81	5359-1015851	CAP, PPP 100p G GB
066A	C82	5359-1015851	CAP, PPP 100p G GB
073A	C91	5359-1015851	CAP, PPP 100P G GB
073A	C92	5359-1015851	CAP, PPP 100P G GB
073A	C93	5359-1015851	CAP, PPP 100P G GB
073A	C94	5359-1015851	CAP, PPP 100P G GB
922	C577	5361-103ZF	CAP, CER .01μ
922	C578	5361-103ZF	CAP, CER .01μ
		RESISTORS	
074A	R91	5135-102522	RES, CBN 1/2P 1K G GB
074A	R92	5135-102522	RES, CBN 1/2P 1K G GB
919	R929	5135-331522	RES, CBN 1/2P 330 IB
919A	R929	5135-102522	RES, CBN 1/2P 1K G GB
921	R930	5135-331522	RES, CBN 1/2P 330 IB
921A	R930	5135-102522	RES, CBN 1/2P 1K G GB
		MISCELLANEOUS	
760	CN507	4443-030185	CONNECTOR
661	PJ2	4489-00202004	PIN JACK, MLT, PRE-OUT/MAIN-IN
907	SW508	4421-02601042	SWITCH, SLIDE, INTEGRATED/SEPARATE

PCB-15 TERMINAL L P.C. BOARD

		RESISTORS	
553	R747	5135-561522	RES, CBN 1/2P 560
554	R749	5135-122522	RES, CBN 1/2P 1.2K
		TRANSISTOR	
557	Q455	5613-3423(Y)	XISTOR, NPN R

PCB-16 TERMINAL R P.C. BOARD

		RESISTORS	
615	R748	5135-561522	RES, CBN 1/2P 560
616	R750	5135-122522	RES, CBN 1/2P 1.2K
		TRANSISTOR	
618	Q456	5613-3423(Y)	XISTOR, NPN R

PCB-17 POWER LED P.C. BOARD

		CAPACITOR	
890	C911	5345-S19CM106	CAP, MINI ELE 10μ/16V
		RESISTOR	
889	R915	5135-221522	RES, CBN 1/2P 220
		DIODES	
918	D911	5637-LT3E47L	LED, POWER
909	D912	5637-GL3PR47	LED, PROTECTOR
		MISCELLANEOUS	
797	CW510	4163-S0203101	CONNECTOR W/W

PCB-18 VOLTAGE SELECTOR P.C. BOARD

		MISCELLANEOUS	
668	⚠HF1	4472-0131	HOLDER, FUSE F1
668	⚠HF2	4472-0131	HOLDER, FUSE F1
053A	⚠SW1	4411-00501102	SWITCH, ROTARY,VOLTAGE SELECTOR
915	TM21	4214-122	TERMINAL
915	TM22	4214-122	TERMINAL
915	TM23	4214-122	TERMINAL

CHASSIS MISCELLANEOUS

		CAPACITORS	
624	C7	5352-2741957	CAP, MTL .27μ
624	C8	5352-2741957	CAP, MTL .27μ
		MISCELLANEOUS	
054C	⚠CO1	4443-712	CONNECTOR
667A	⚠F1	5732-312030	FUSE,T3.15A/250V
654A	⚠P1	4161-71150	CORD W/PLUG
674A	⚠T1	5584-T0902	XFORMER, POWER
663		4442-14	PIN PLUG (X2)
053C	⚠	4150-8	TUBING, SPE
034A	LUG	4211-4	LUG, W-108 G GB
034A	LUG	4211-4	LUG, W-107 G GB
077A	LUG	4211-4	LUG, C97 G GB

PACKAGE PARTS LIST

021	1756-06304	LABEL 230V/50Hz
022	1756-03108	LABEL (I), IB
022	1756-03124	LABEL (G), G GB
107	1111-0320J152	OWNER GUIDE, OG
113	1241-R0123351	POLYETHY BAG, OG
122	1241-R0165751	POLYETHY BAG, SET
123	1222-7392	CUSHION, CARTON REAR SPACER (x 2)
125	1221-777198	CARTON BOX G
125	1221-31502	CARTON BOX GB IB
126	1222-7357	CUSHION, L
127	1222-7358	CUSHION, R
128	1223-11747	SOFT SHEET, SET
129	1223-11115	SOFT SHEET, AC CORD

Ser. No.	Ref. No.	Part No.	Description

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE	: Electrolytic
CAP, CER	: Ceramic
CAP, PPP	: Polypropylene
CAP, MYL	: Mylar
CAP, MCA	: Mica
CAP, MINI BP	: Bipolar
CAP, ELE BP	: Electrolytic Bipolar
CAP, STY	: Polystyrene Film
CAP, SPE	: Special
CAP, TAN	: Tantalum
470 μ	: 470 μF
6800p	: 6800pF
.047 μ	: 0.047 μF

RESISTORS

RES, CBN 1/6P	: Carbon 1/6W
RES, FUSE	: Fuse
RES, CEM 5P	: Cement 5W
RES, MTL 1P	: Metal 1W
2.2K	: 2.2kΩ
220	: 220Ω

TRANSISTORS

XISTOR	: Transistor
FET	: Field Effect Transistor

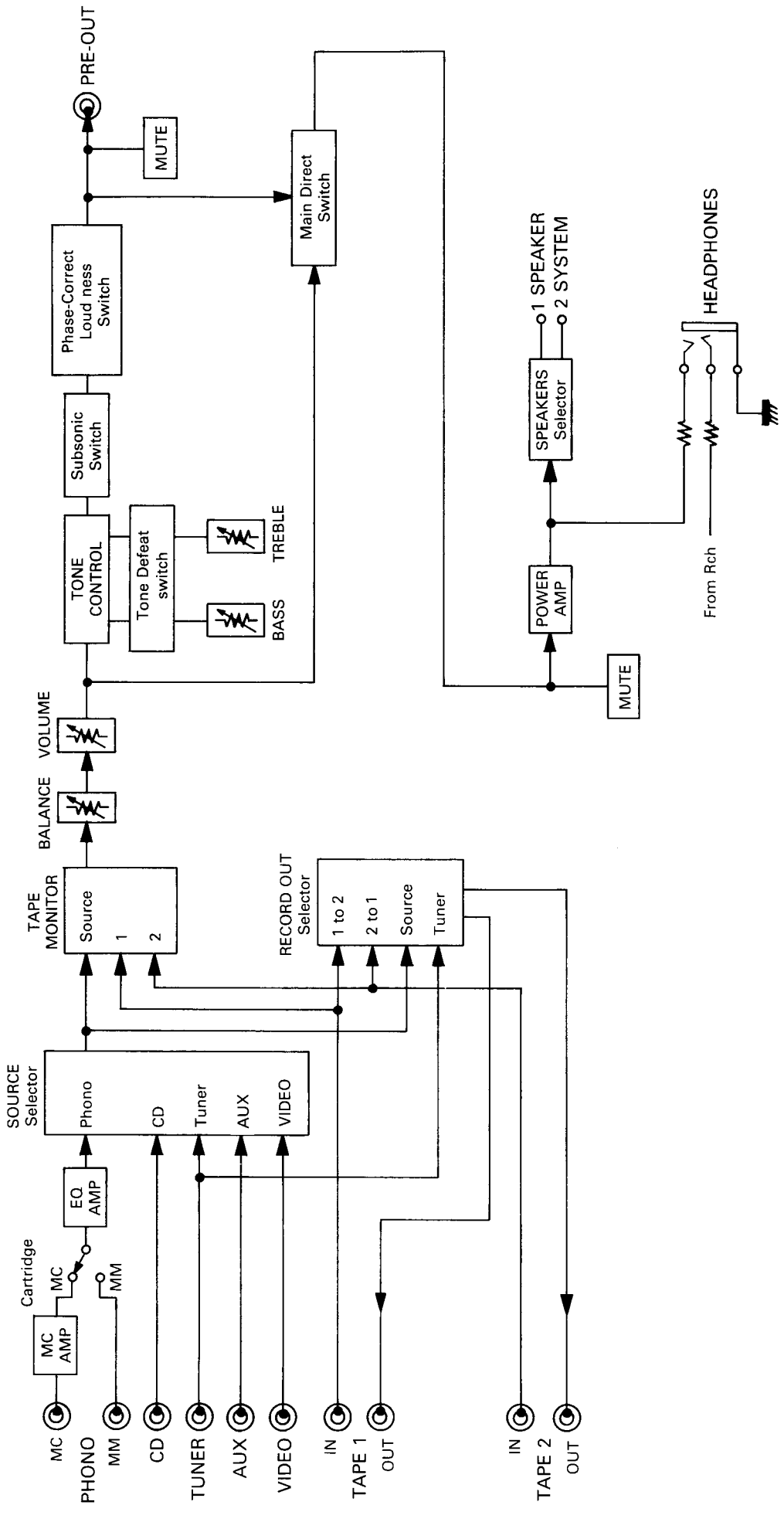
CONTROLS

RES, V CBN	: Variable Carbon Resistor
RES, SEMI FIX	: Semi-fixed Resistor

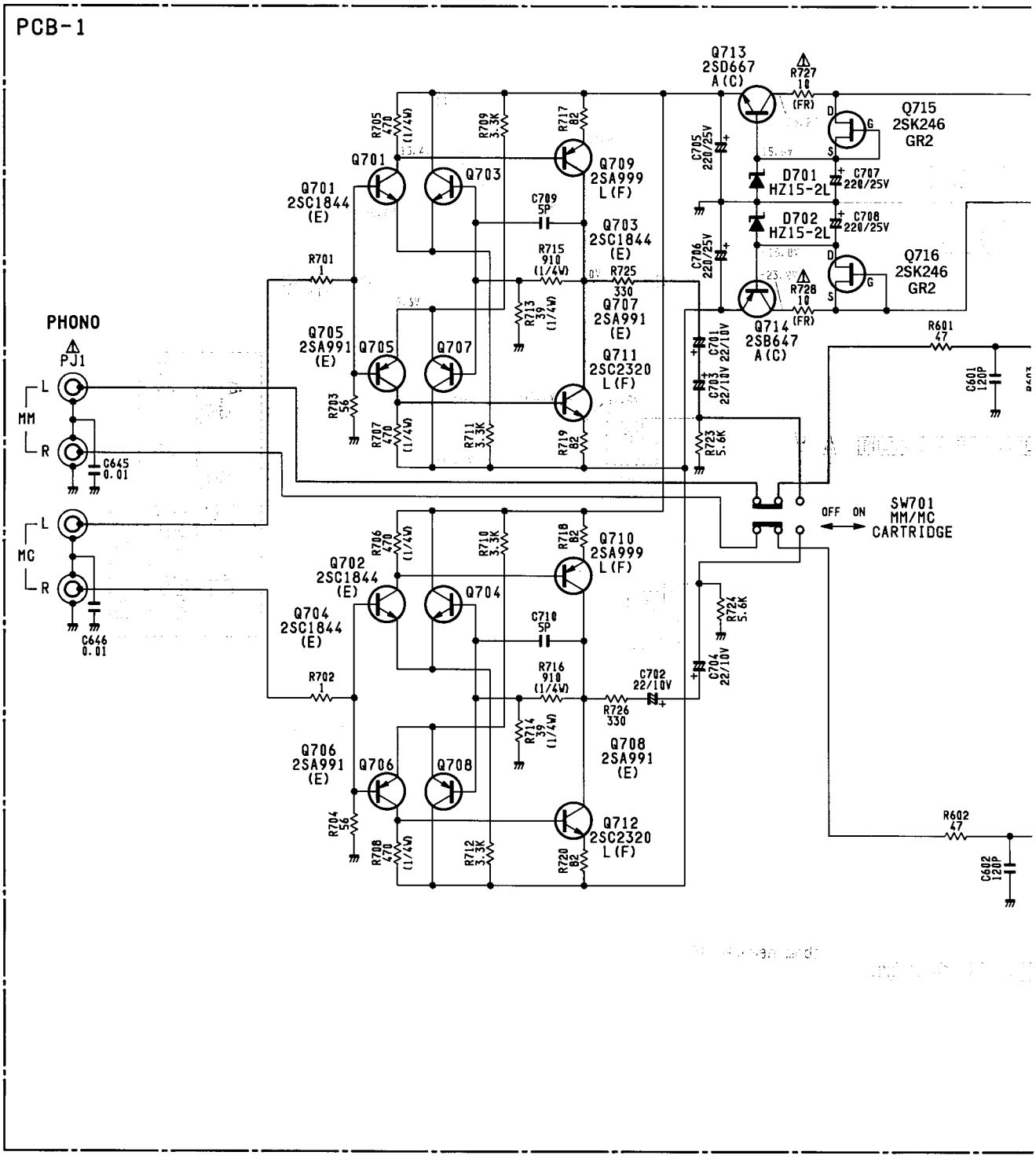
NOTE

SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

BLOCK DIAGRAM

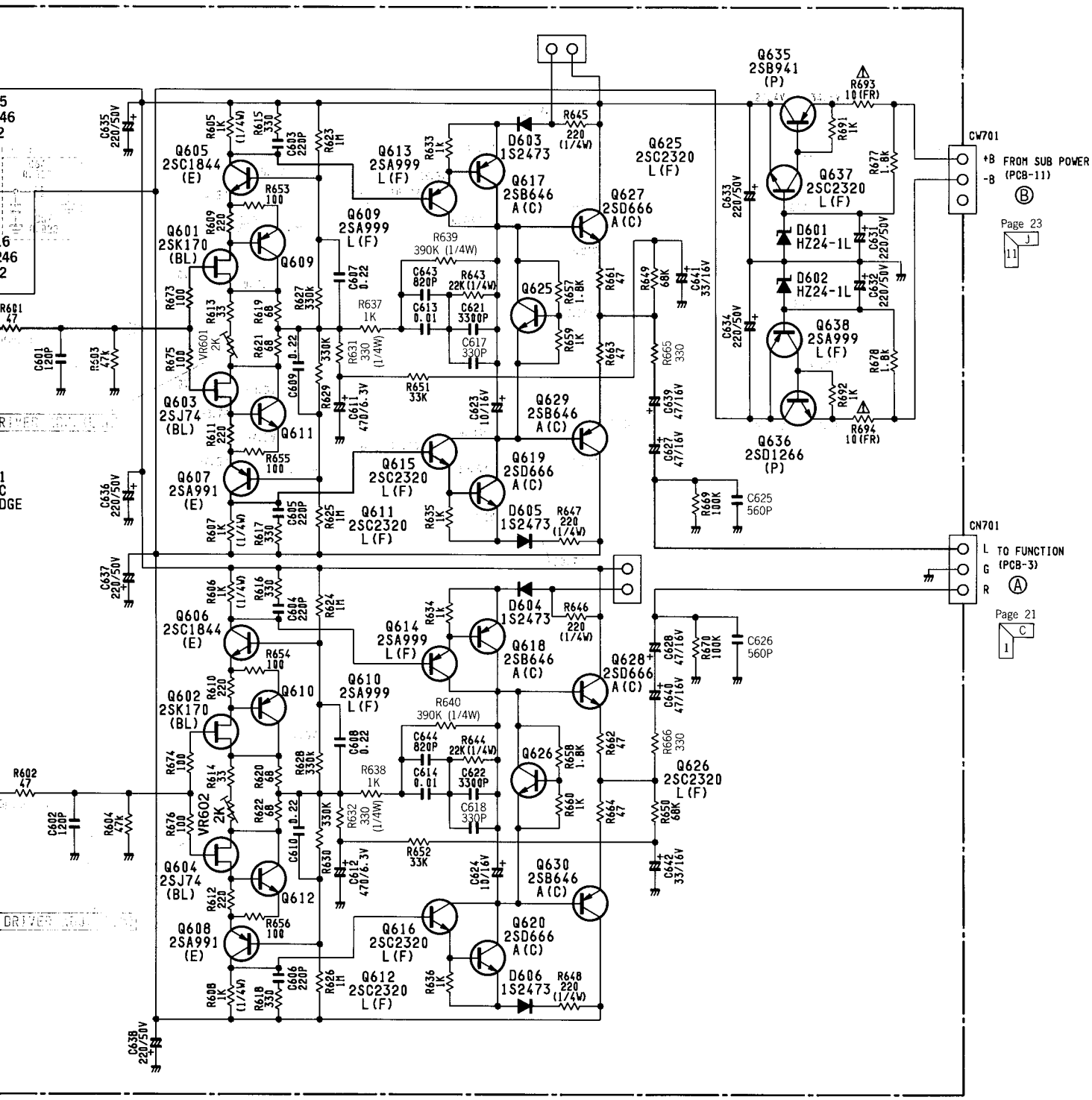


SCHEMATIC DIAGRAM (PHONO AMP SECTION)

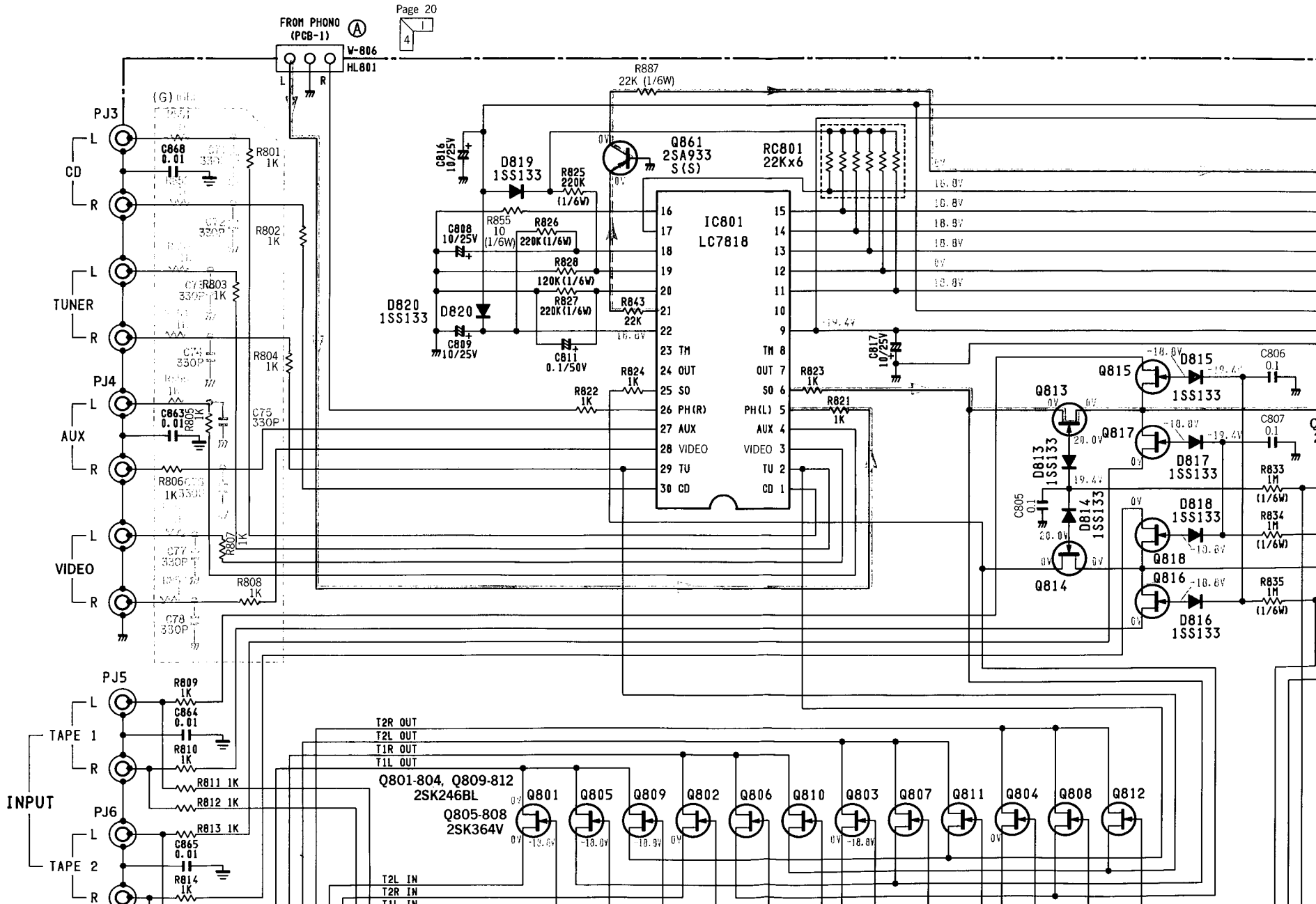


NOTE:

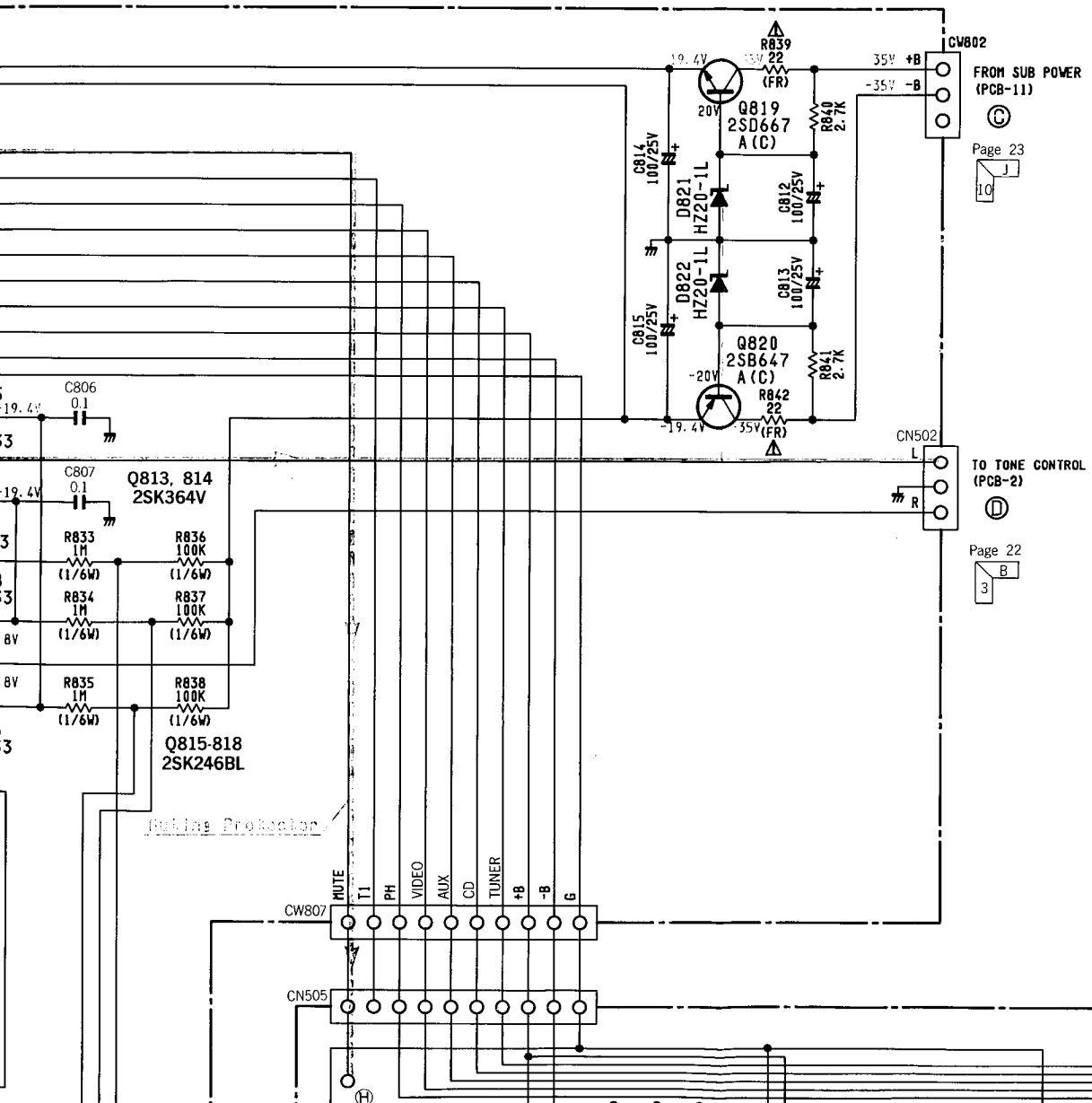
1. ALL RESISTANCES VALUES ARE IN Ω.
   KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. ⚠ SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.



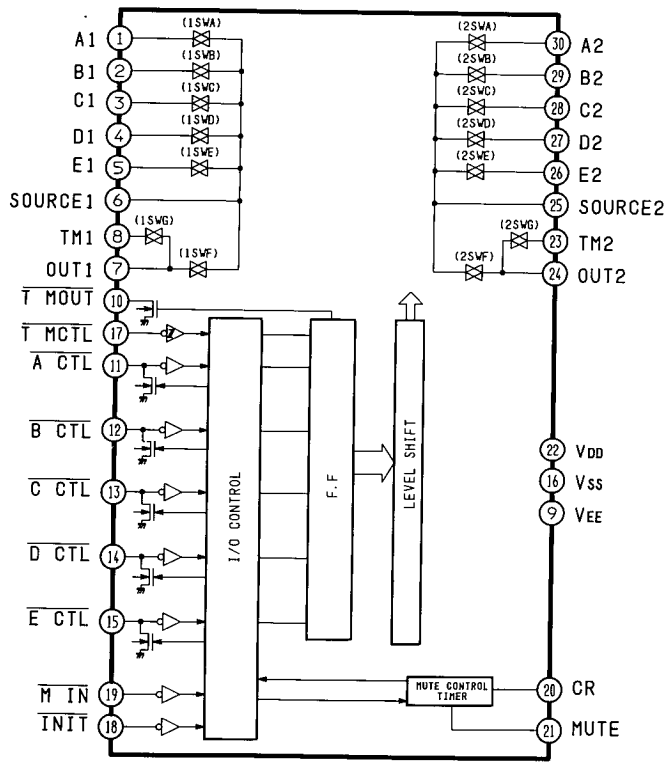
SCHEMATIC DIAGRAM (FUNCTION & VIDEO SECTION)

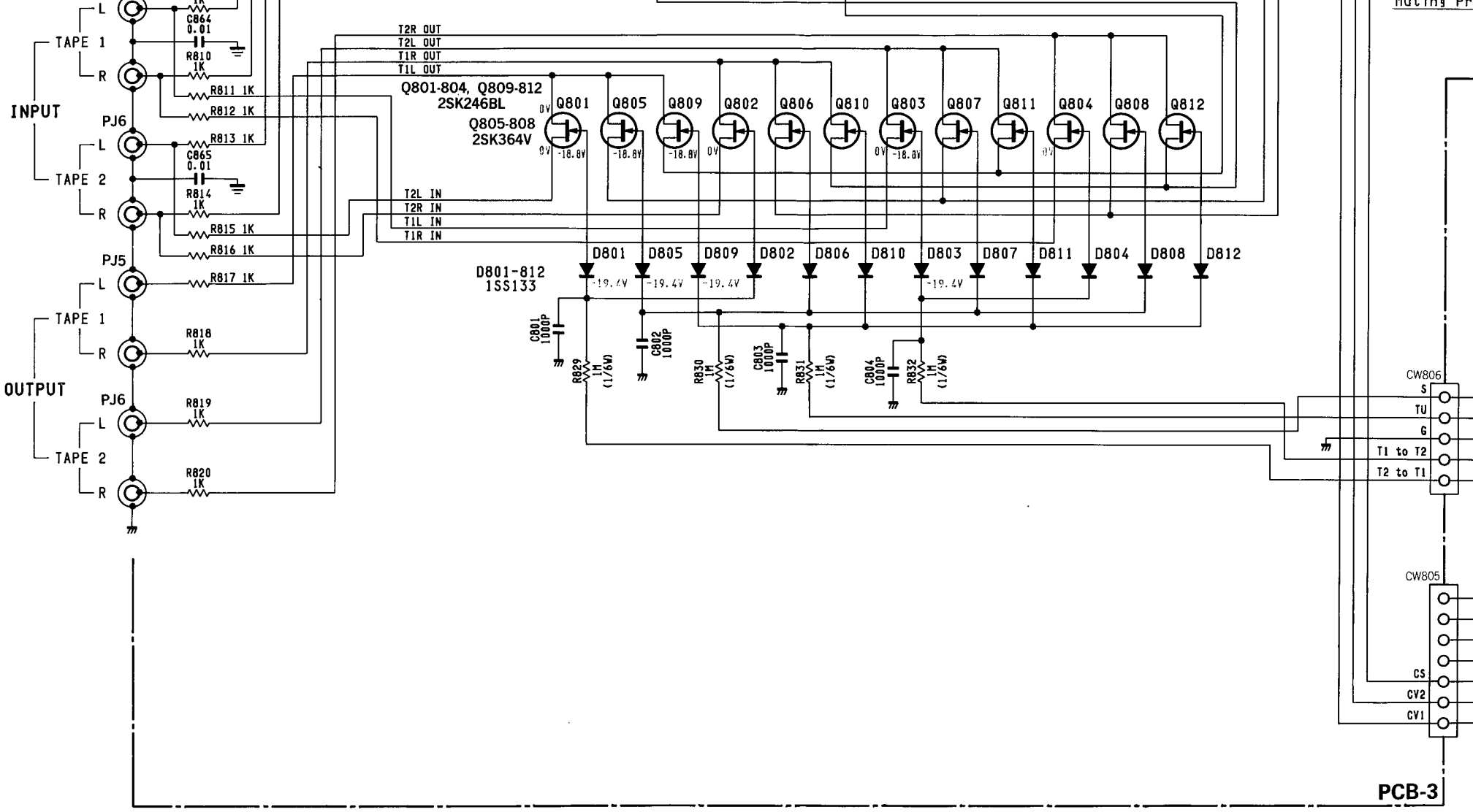


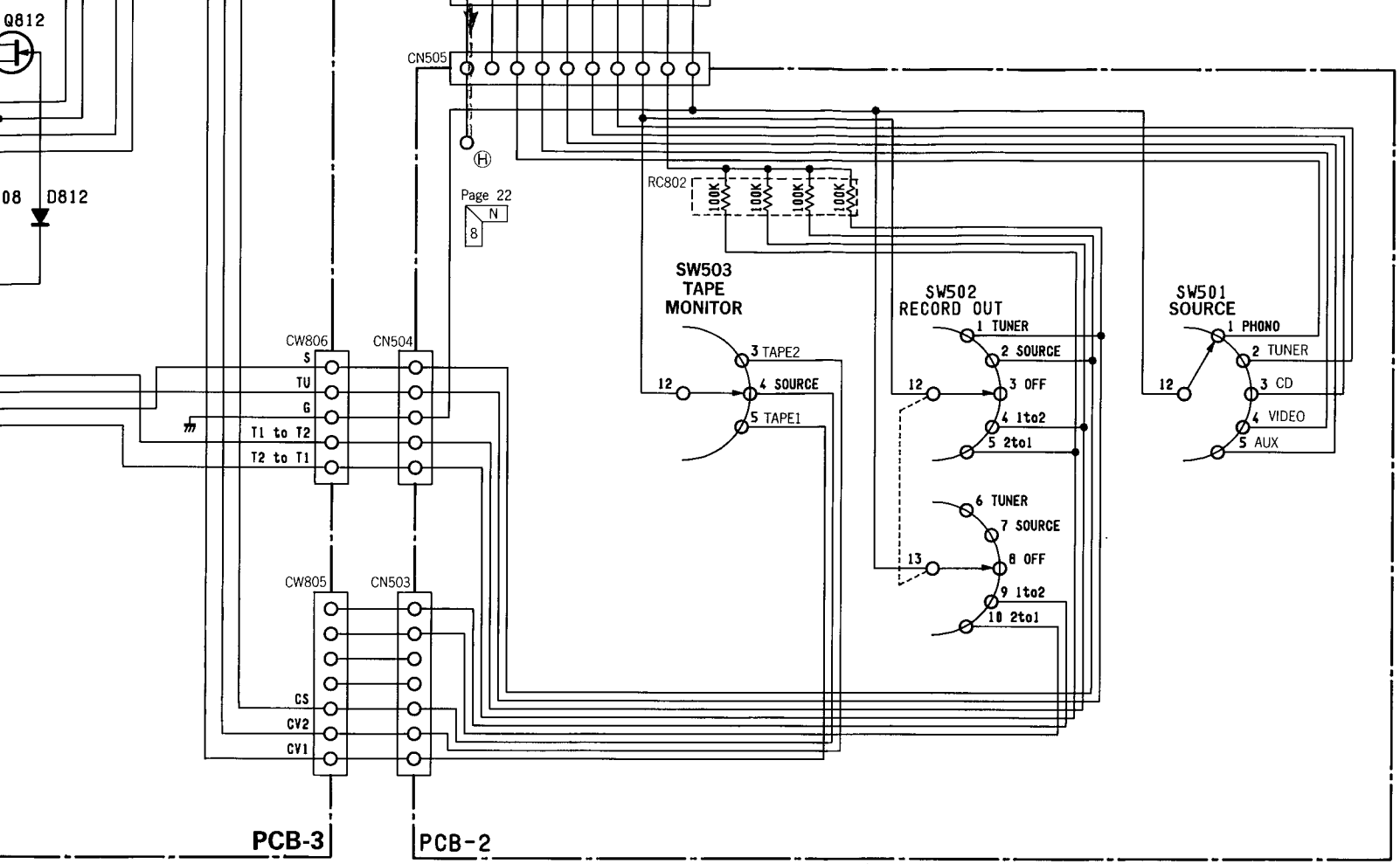
H I J K L M N



LC7818



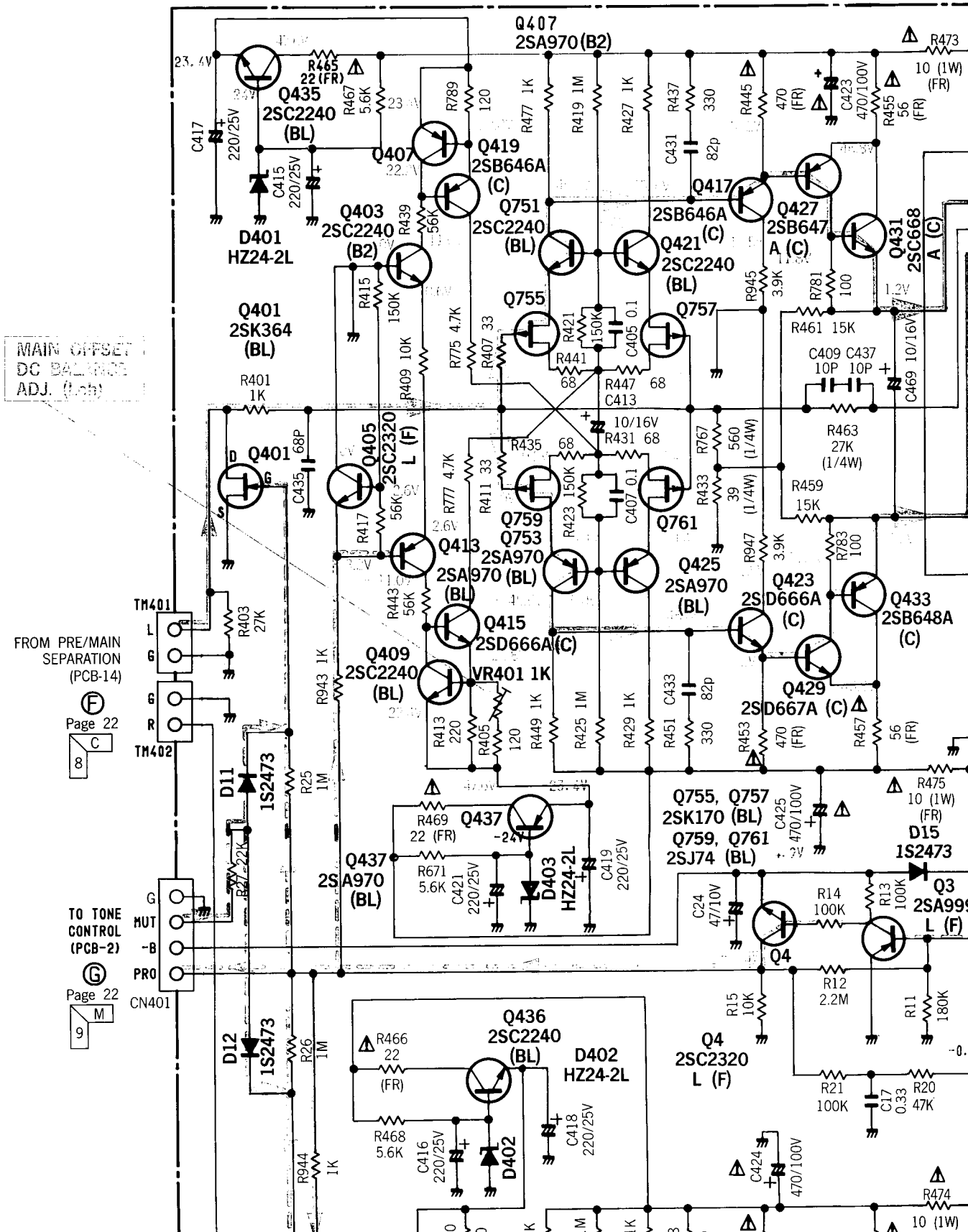

INPUT
PJ6
L
TAPE 1
R
C864 0.01
R810 1K
R811 1K
R812 1K
L
TAPE 2
R
C865 0.01
R813 1K
R814 1K
R815 1K
R816 1K
PJ5
L
TAPE 1
R
R817 1K
OUTPUT
PJ6
L
TAPE 2
R
R818 1K
R819 1K
R820 1K
T2R OUT
T2L OUT
T1R OUT
T1L OUT
T2L IN
T2R IN
T1L IN
T1R IN
Q801-804, Q809-812
2SK246BL
Q805-808
2SK364V
Q801 Q805 Q809 Q802 Q806 Q810 Q803 Q807 Q811 Q804 Q808 Q812
0V
-18.8V
D801-812
1SS133
D801 D805 D809 D802 D806 D810 D803 D807 D811 D804 D808 D812
-19.4V
C801 1000P
C802 1000P
C803 1000P
C804 1000P
R829 1M (1/6W)
R830 1M (1/6W)
R831 1M (1/6W)
R832 1M (1/6W)
CW806
S
TU
G
T1 to T2
T2 to T1
CW805
CS
CV2
CV1
PCB-3

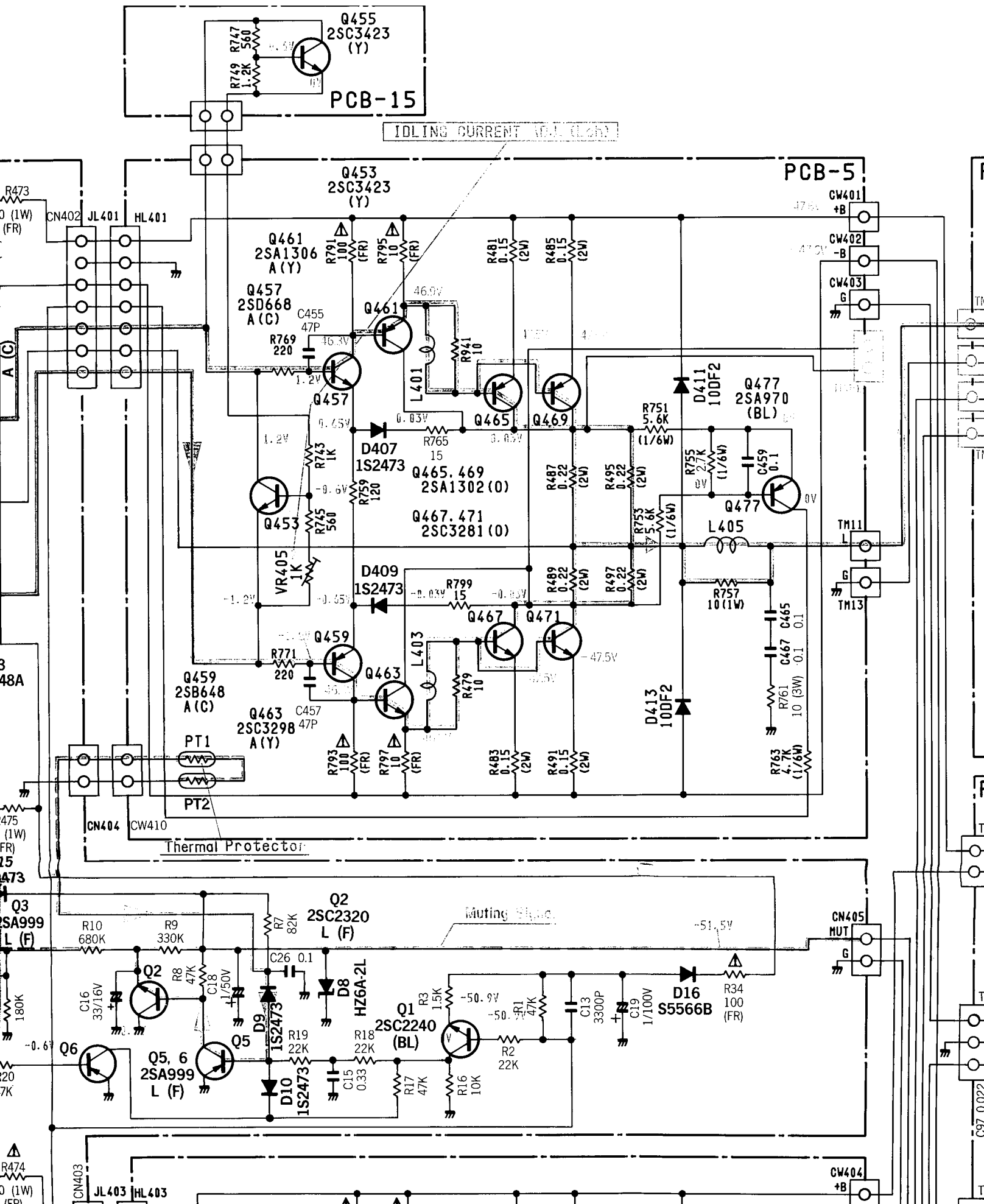


NOTE:

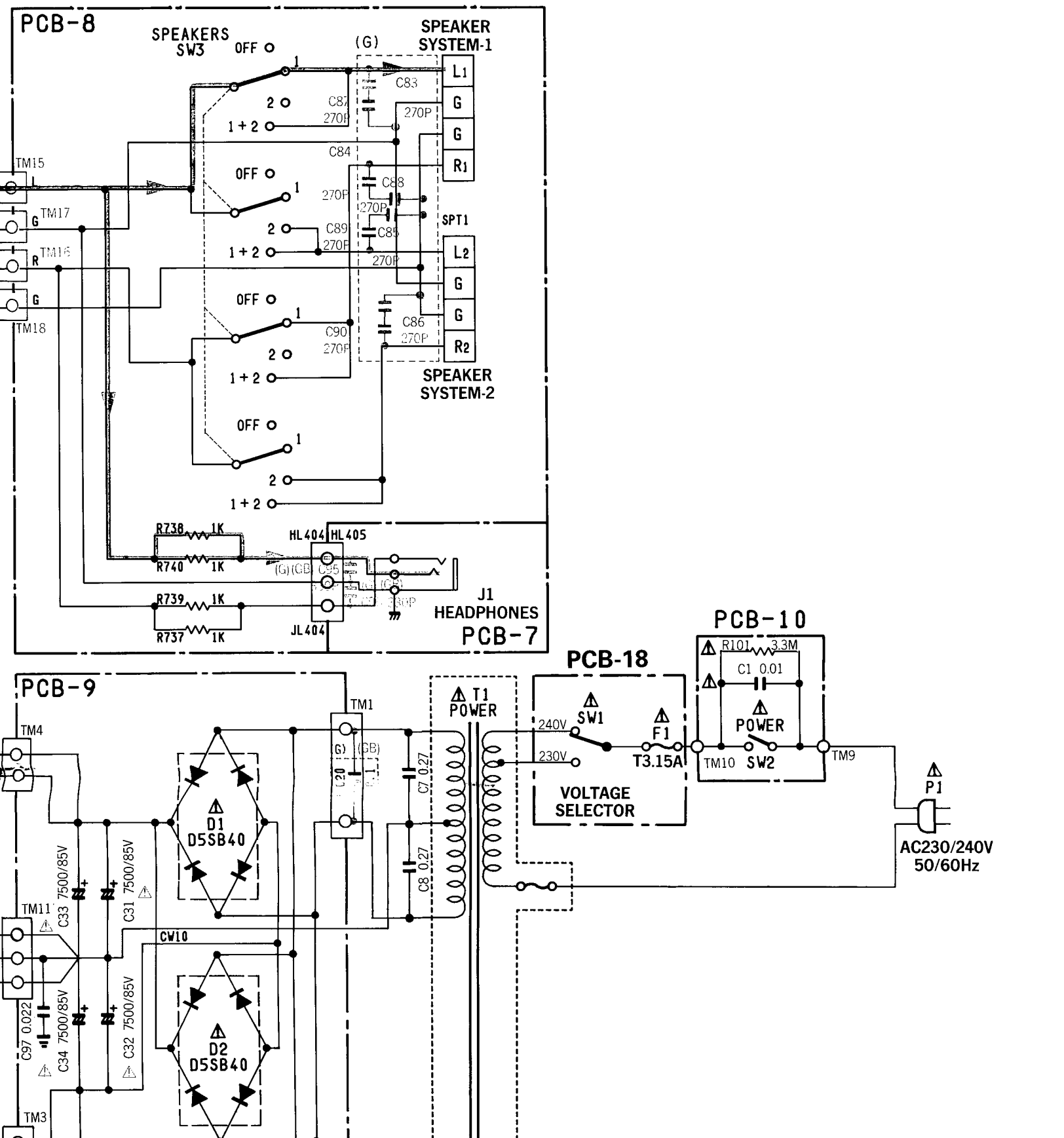
1. ALL RESISTANCES VALUES ARE IN Ω.
   KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. ⚠ SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

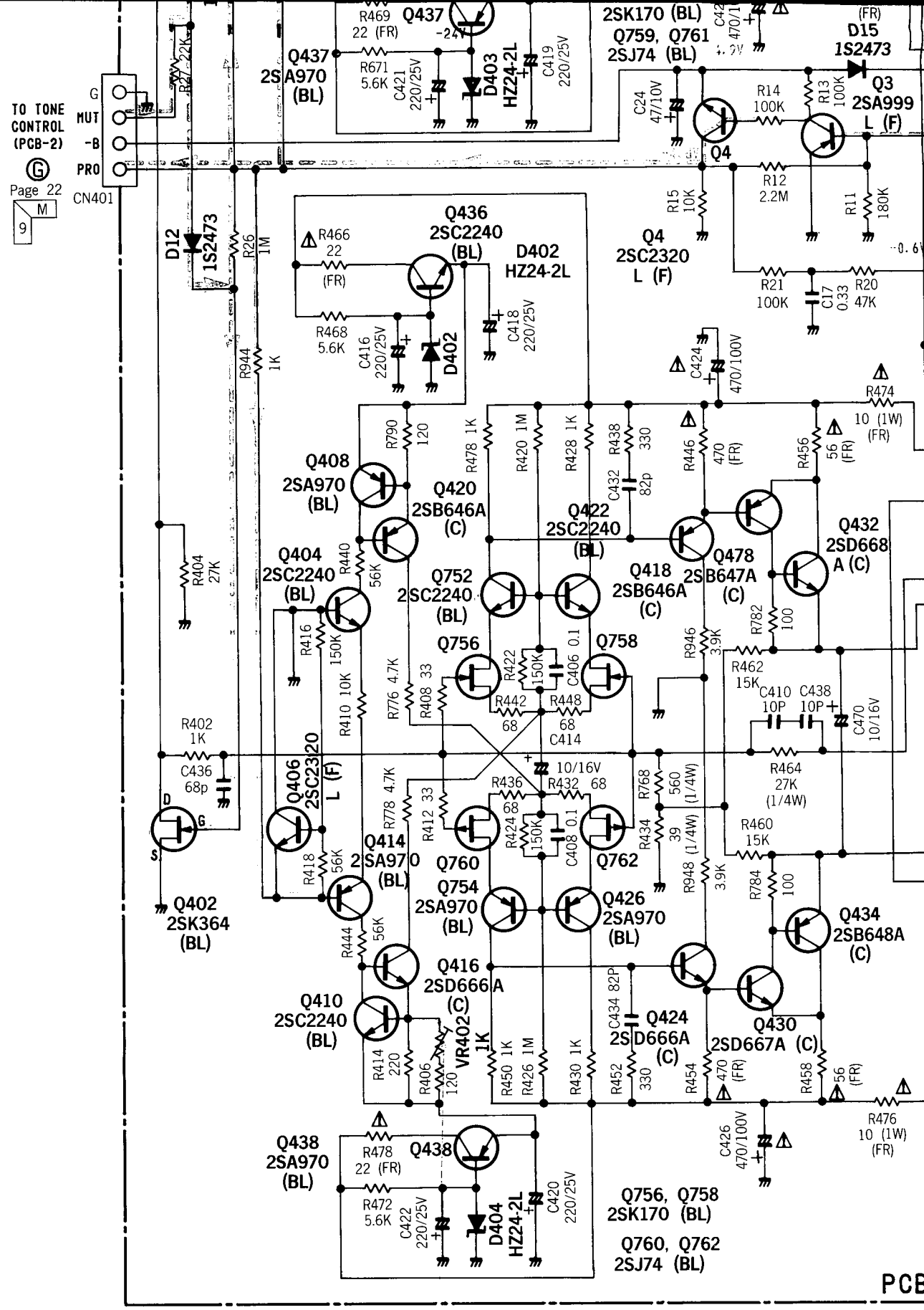
SCHEMATIC DIAGRAM (POWER AMP SECTION)

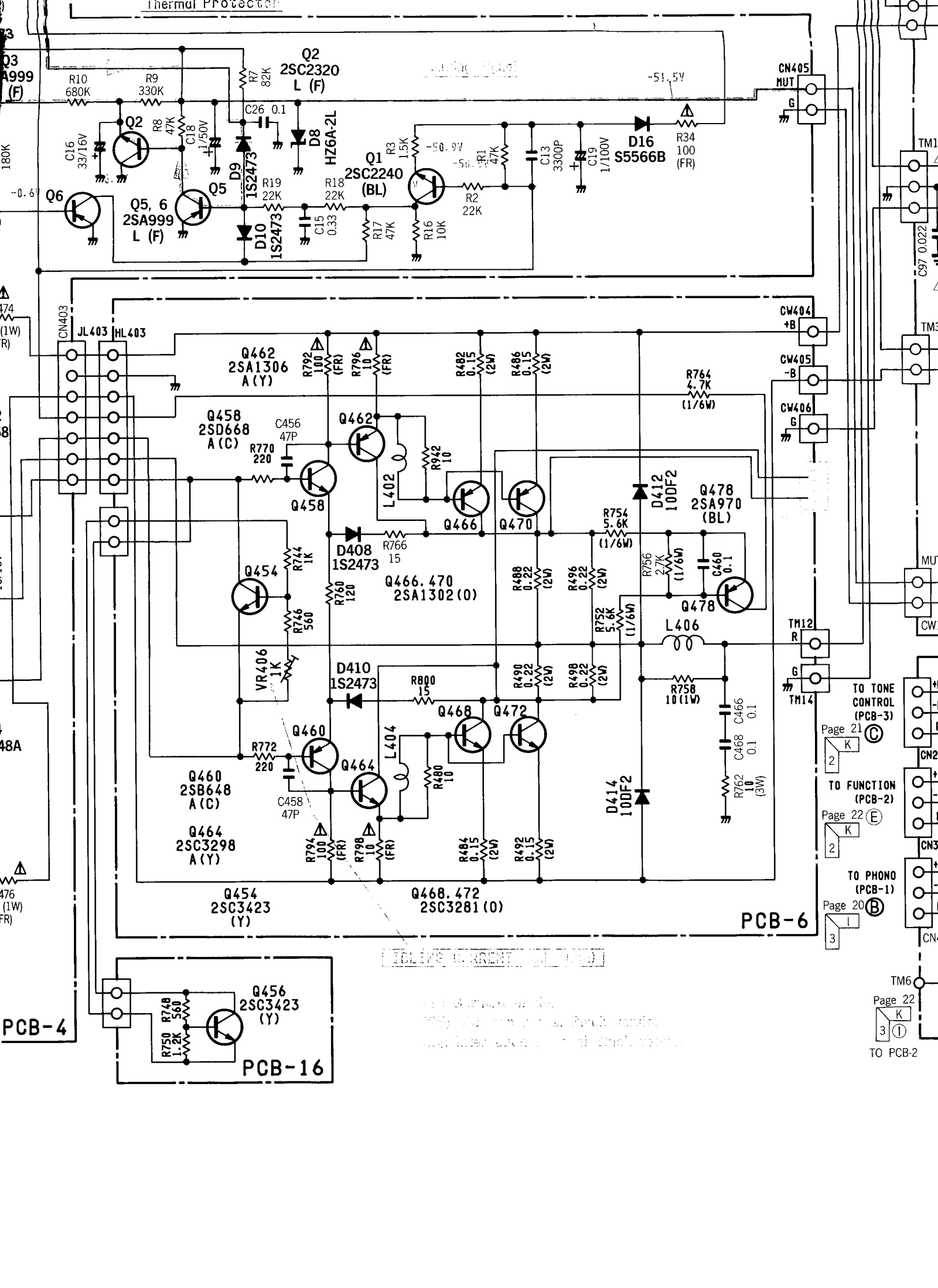


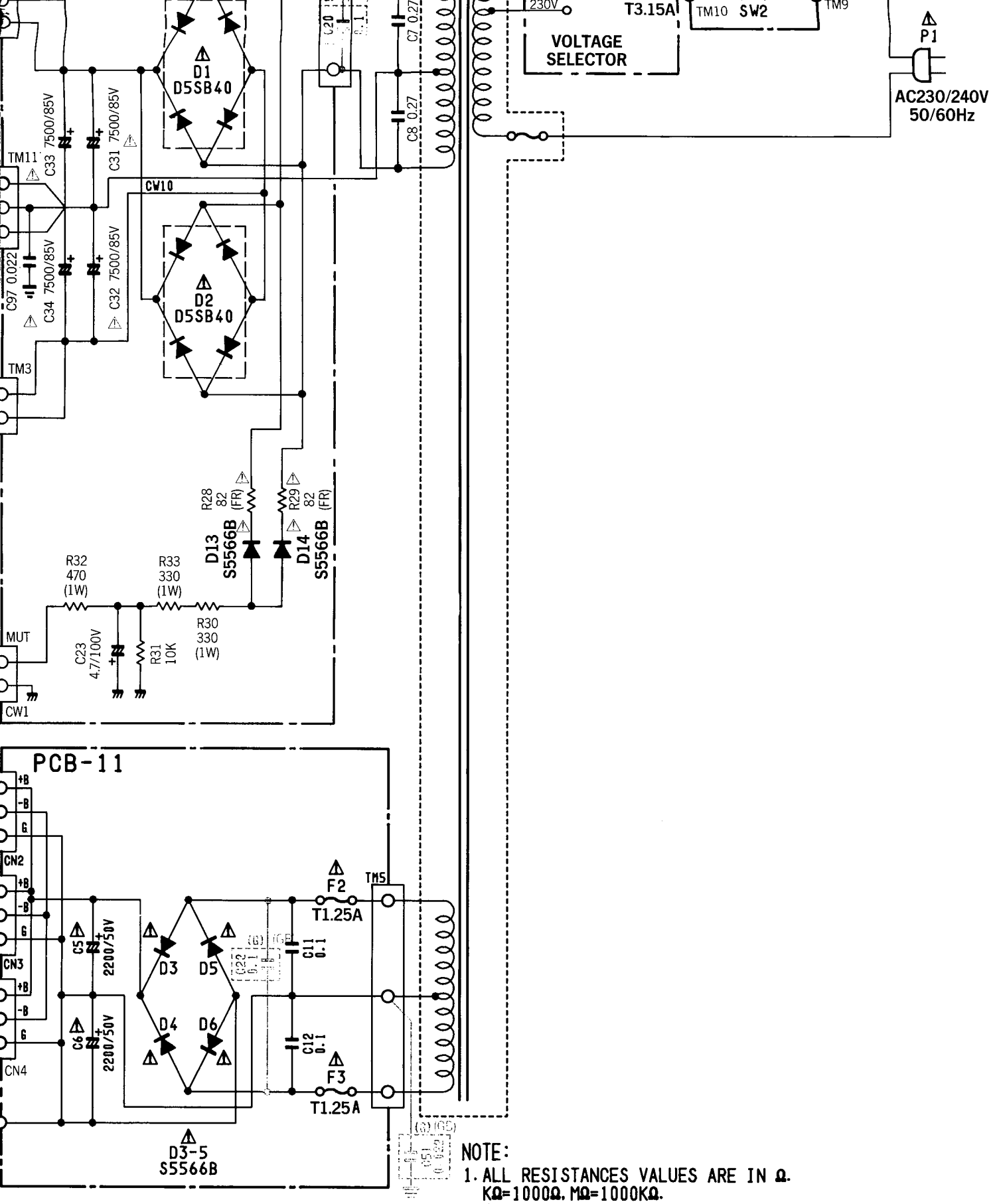

PCB-15
Q455
2SC3423
(Y)
R747
560
R749
1.2K
IDLING CURRENT
PCB-5
Q453
2SC3423
(Y)
Q461
2SA1306
A(Y)
Q457
2SD668
A(C)
C455
47P
R769
220
R791
100
(FR)
R795
10
(FR)
R481
0.15
(2W)
R485
0.15
(2W)
R941
10
L401
Q465
Q469
D407
1S2473
R765
15
Q465.469
2SA1302(O)
Q467.471
2SC3281(O)
D411
10DF2
Q477
2SA970
(BL)
R751
5.6K
(1/6W)
R755
2.7K
(1/6W)
C459
0.1
R743
1K
R759
120
R745
560
Q453
VR405
1K
R487
0.22
(2W)
R495
0.22
(2W)
R753
5.6K
(1/6W)
L405
D409
1S2473
R799
15
R489
0.22
(2W)
R497
0.22
(2W)
R757
10(1W)
C465
0.1
C467
0.1
R761
10 (3W)
Q467
Q471
Q459
R771
220
Q463
L403
R479
10
Q459
2SB648
A(C)
Q463
2SC3298
A(Y)
C457
47P
D413
10DF2
R793
100
(FR)
R797
10
(FR)
R483
0.15
(2W)
R491
0.15
(2W)
R763
4.7K
(1/6W)
PT1
PT2
CW401
+B
CW402
-B
CW403
G
TM11
L
TM13
G
CN402
JL401
HL401
CN404
CW410
Thermal Protector
Muting Signal
CN405
MUT
G
Q3
2SA999
L (F)
R10
680K
R9
330K
R7
82K
Q2
2SC2320
L (F)
C26 0.1
D8
HZ6A-2L
Q2
R8
47K
C16
33/16V
C18
1/50V
D9
1S2473
Q6
Q5
Q5, 6
2SA999
L (F)
R19
22K
R18
22K
D10
1S2473
C15
0.33
R17
47K
R16
10K
Q1
2SC2240
(BL)
R3
1.5K
R1
47K
R2
22K
C13
3300P
C19
1/100V
D16
S5566B
R34
100
(FR)
-51.5V
-50.9V
CW404
+B
CN403
JL403
HL403

K	L	M	N	O	P


PCB-8
SPEAKERS SW3
OFF
1
2
1+2
(G)
SPEAKER SYSTEM-1
L1
G
G
R1
C83
C87 270P
270P
C84
C88 270P
270P
C85
C89 270P
270P
C86 270P
C90 270P
SPT1
L2
G
G
R2
SPEAKER SYSTEM-2
TM15
TM17
TM16
TM18
R738 1K
R740 1K
HL404 HL405
(G)(GB) C95
R739 1K
R737 1K
JL404
J1 HEADPHONES
PCB-7
PCB-9
TM4
TM1
D1 D5SB40
D2 D5SB40
C33 7500/85V
C31 7500/85V
C34 7500/85V
C32 7500/85V
C97 0.022
C20
C7 0.27
C8 0.27
CW10
TM11
TM3
T1 POWER
PCB-18
SW1
240V
230V
F1 T3.15A
VOLTAGE SELECTOR
PCB-10
R101 3.3M
C1 0.01
POWER
TM10 SW2
TM9
P1
AC230/240V 50/60Hz


TO TONE CONTROL (PCB-2)
G
MUT
-B
PRO
CN401
Page 22
M 9
R27 22K
D12 1S2473
R26 1M
R944 1K
R469 22 (FR)
Q437 -24?
Q437 2SA970 (BL)
R671 5.6K
C421 220/25V
D403 HZ24-2L
C419 220/25V
2SK170 (BL) Q759, Q761
2SJ74 (BL)
D15 1S2473
C24 47/10V
Q4
R14 100K
R13 100K
Q3 2SA999 L (F)
R12 2.2M
R15 10K
R11 180K
Q4 2SC2320 L (F)
R21 100K
C17 0.33
R20 47K
R466 22 (FR)
Q436 2SC2240 (BL)
D402 HZ24-2L
R468 5.6K
C416 220/25V
D402
C418 220/25V
C424 470/100V
R474 10 (1W) (FR)
R790 120
R478 1K
R420 1M
R428 1K
R438 330
C432 82p
R446 470 (FR)
R456 56 (FR)
Q408 2SA970 (BL)
Q420 2SB646A (C)
Q422 2SC2240 (BL)
Q432 2SD668 A (C)
Q404 2SC2240 (BL)
R440 56K
Q752 2SC2240 (BL)
Q418 2SB646A (C)
Q478 2SB647A (C)
R404 27K
R782 100
R416 150K
R410 10K
Q756
R422 150K
C406 0.1
Q758
R946 3.9K
R776 4.7K
R408 33
R442 68
R448 68
C414
R462 15K
C410 10P
C438 10P
C470 10/16V
R402 1K
C436 68p
Q406 2SC2320 L (F)
10/16V
R436 68
R432 68
R768 560 (1/4W)
R778 4.7K
R412 33
R424 150K
C408 0.1
R434 39 (1/4W)
R464 27K (1/4W)
R460 15K
Q414 2SA970 (BL)
Q760
Q762
R948 3.9K
R784 100
R418 56K
Q754 2SA970 (BL)
Q426 2SA970 (BL)
Q434 2SB648A (C)
Q402 2SK364 (BL)
R444 56K
Q416 2SD666A (C)
Q410 2SC2240 (BL)
C434 82P
Q424 2SD666A (C)
Q430 2SD667A (C)
R414 220
R406 120
VR402 1K
R450 1K
R426 1M
R430 1K
R452 330
R454 470 (FR)
R458 56 (FR)
R476 10 (1W) (FR)
C426 470/100V
R478 22 (FR)
Q438
Q438 2SA970 (BL)
R472 5.6K
C422 220/25V
D404 HZ24-2L
C420 220/25V
Q756, Q758 2SK170 (BL)
Q760, Q762 2SJ74 (BL)
PCB

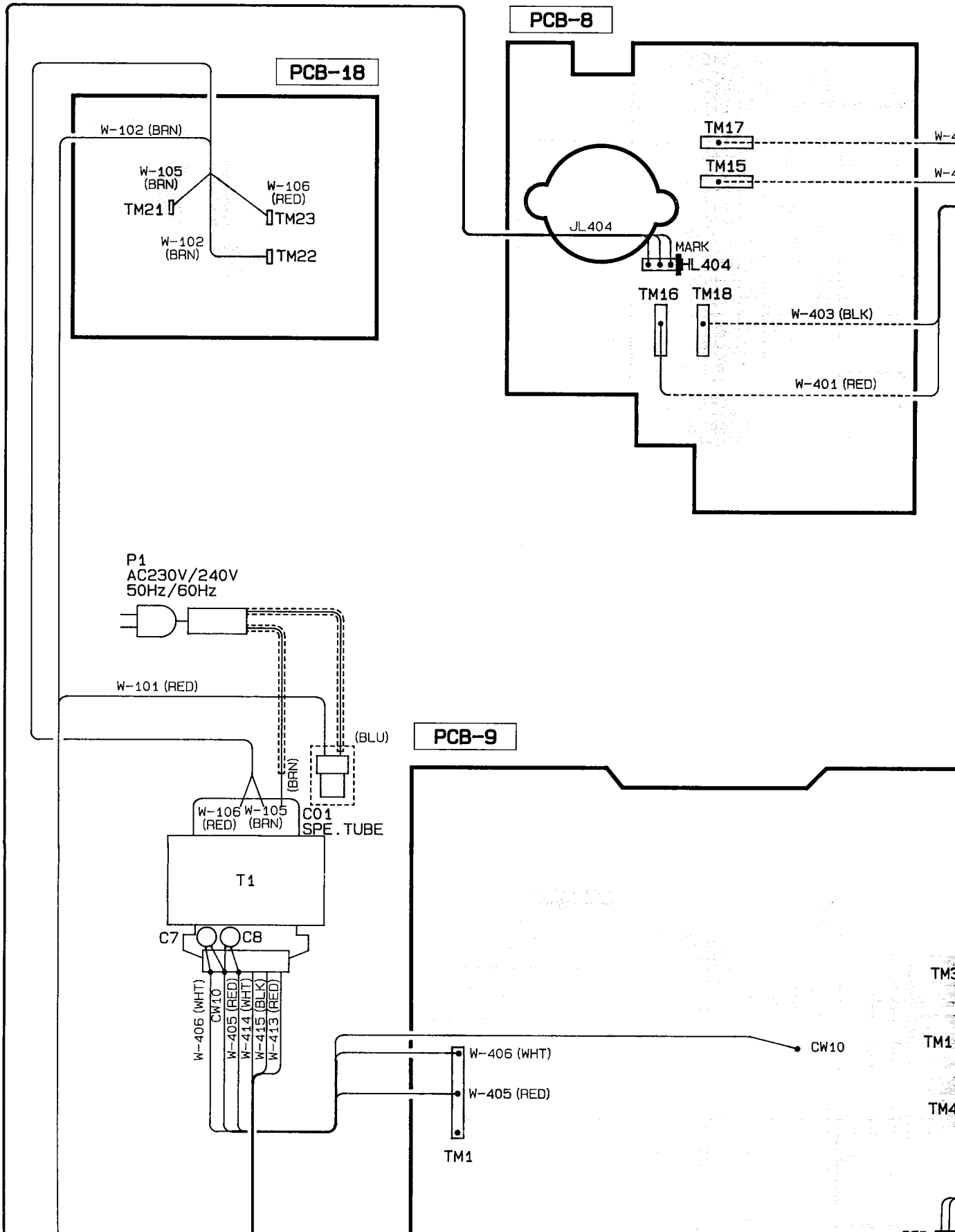

Thermal Protector
Q2
2SC2320
L (F)
R10
680K
R9
330K
R7
82K
C26 0.1
D8
HZ6A-2L
-51.5V
CN405
MUT
G
Q2
R8
47K
C18
1/50V
C16
33/16V
D9
1S2473
Q1
2SC2240
(BL)
R3
1.5K
-50.9V
R1
47K
C13
3300P
C19
1/100V
D16
S5566B
R34
100
(FR)
Q6
Q5, 6
2SA999
L (F)
Q5
R19
22K
R18
22K
D10
1S2473
C15
0.33
R17
47K
R16
10K
R2
22K
CN403
JL403
HL403
Q462
2SA1306
A(Y)
R792
100
(FR)
R796
10
(FR)
R482
0.15
(2W)
R486
0.15
(2W)
R764
4.7K
(1/6W)
CW404
+B
CW405
-B
CW406
G
Q458
2SD668
A(C)
C456
47P
R770
220
Q458
Q462
L402
R942
10
Q466
Q470
D412
10DF2
Q478
2SA970
(BL)
D408
1S2473
R766
15
Q466.470
2SA1302(O)
R754
5.6K
(1/6W)
R756
2.7K
(1/6W)
C460
0.1
Q478
Q454
R744
1K
R760
120
R746
560
R488
0.22
(2W)
R496
0.22
(2W)
R752
5.6K
(1/6W)
L406
TM12
R
G
TM14
VR406
1K
D410
1S2473
R800
15
R490
0.22
(2W)
R498
0.22
(2W)
R758
10(1W)
C466
0.1
C468
0.1
R762
10
(3W)
Q468
Q472
Q460
R772
220
Q464
L404
R480
10
Q460
2SB648
A(C)
C458
47P
Q464
2SC3298
A(Y)
D414
10DF2
R794
100
(FR)
R798
10
(FR)
R484
0.15
(2W)
R492
0.15
(2W)
Q454
2SC3423
(Y)
Q468.472
2SC3281(O)
TO TONE
CONTROL
(PCB-3)
Page 21
C
K
2
TO FUNCTION
(PCB-2)
Page 22
E
K
2
TO PHONO
(PCB-1)
Page 20
B
I
3
TM6
Page 22
K
3
1
TO PCB-2
PCB-6
PCB-4
Q456
2SC3423
(Y)
R748
560
R750
1.2K
PCB-16

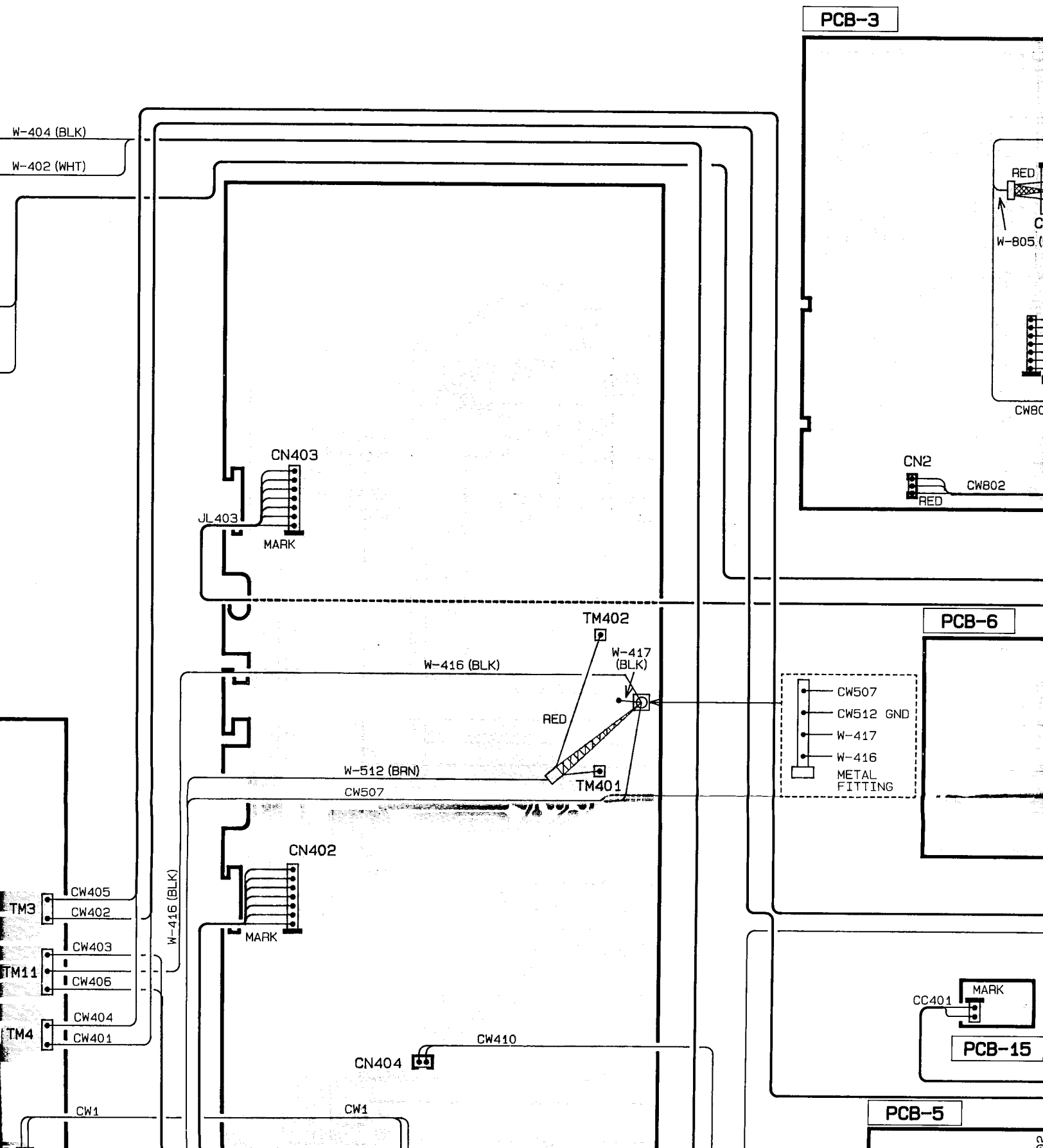


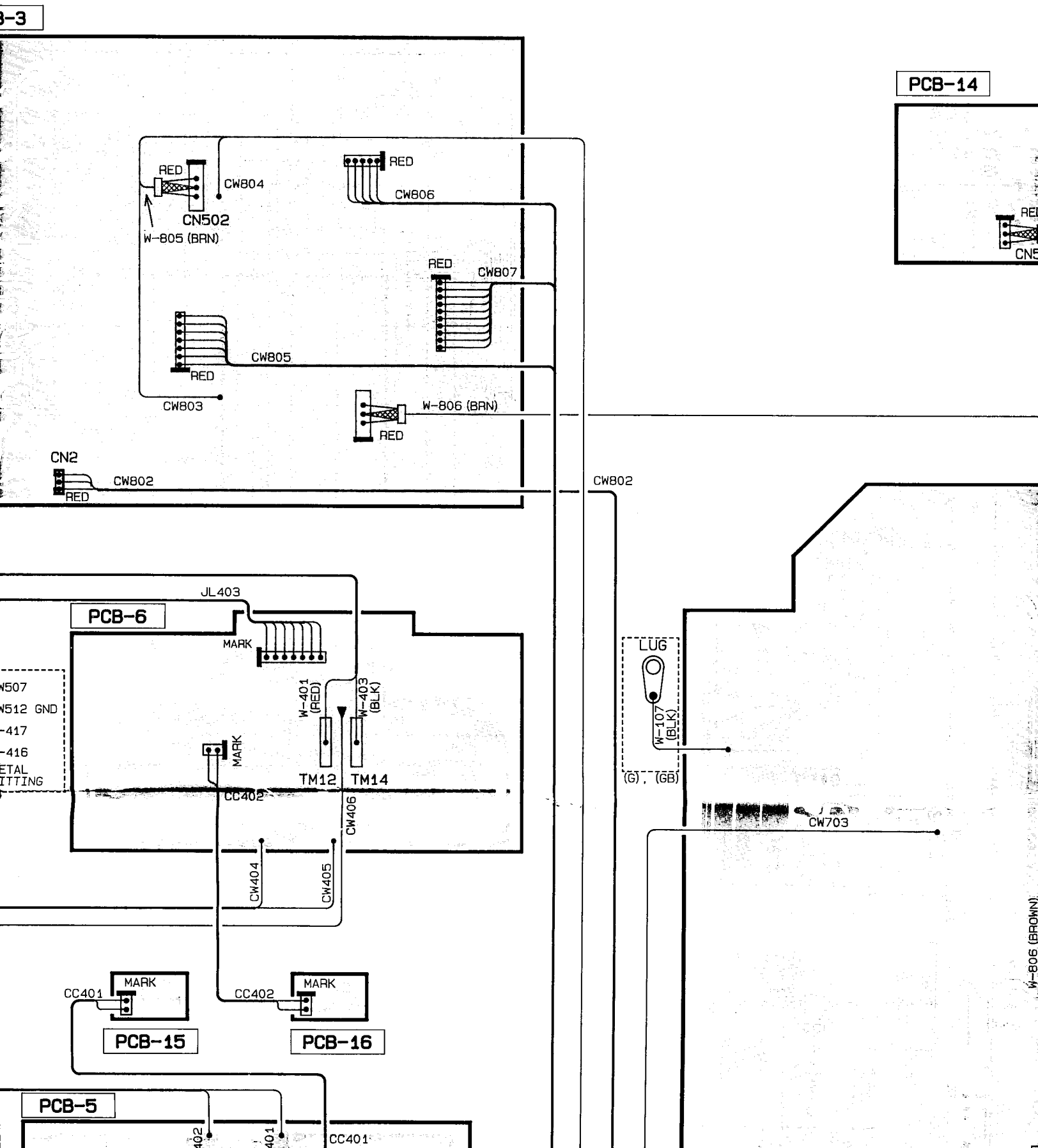
NOTE:

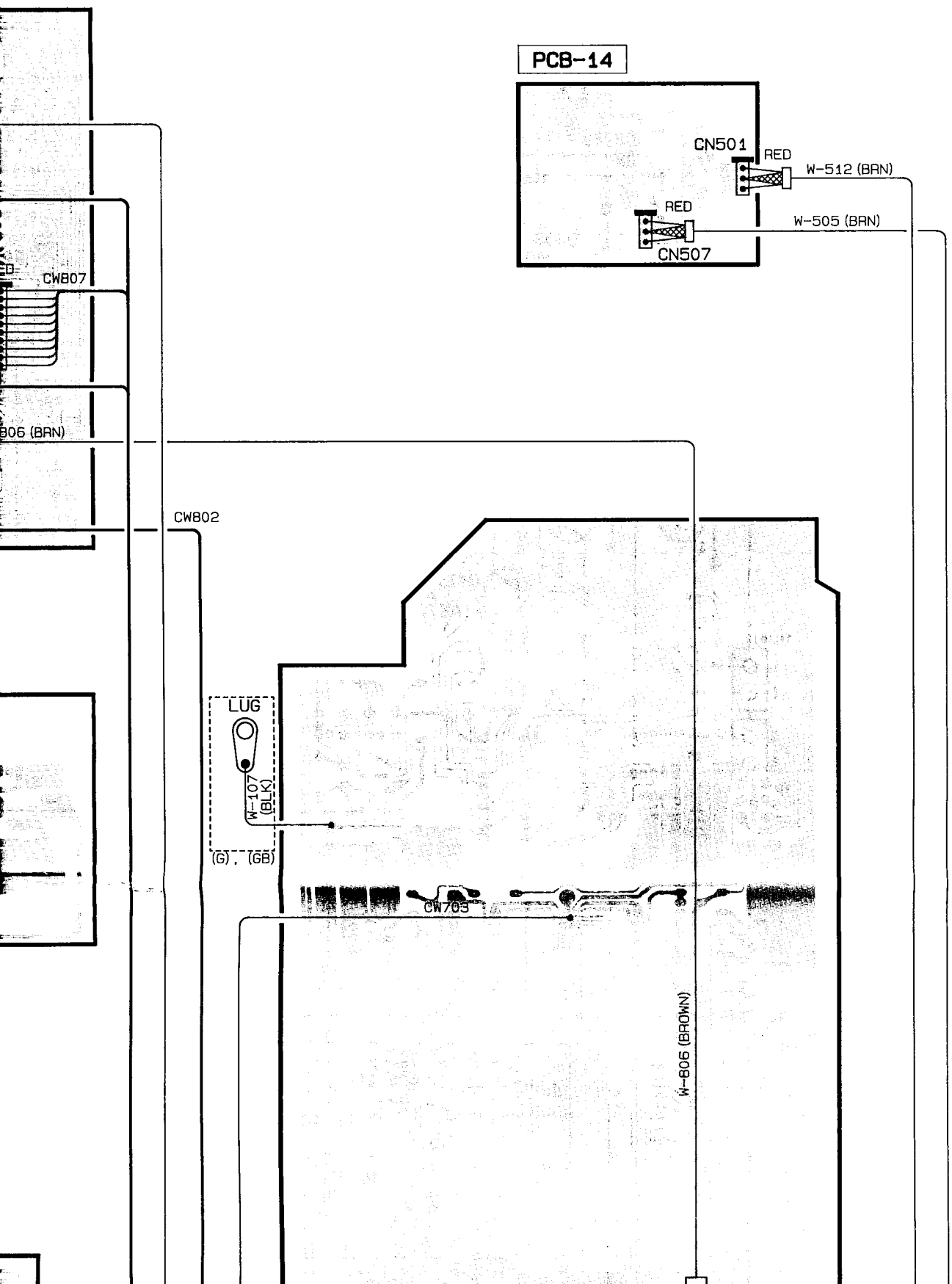
1. ALL RESISTANCES VALUES ARE IN Ω.
   KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμ
4. ...V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. ⚠ SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESEN
   SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACE
   BY ORIGINAL PARTS.

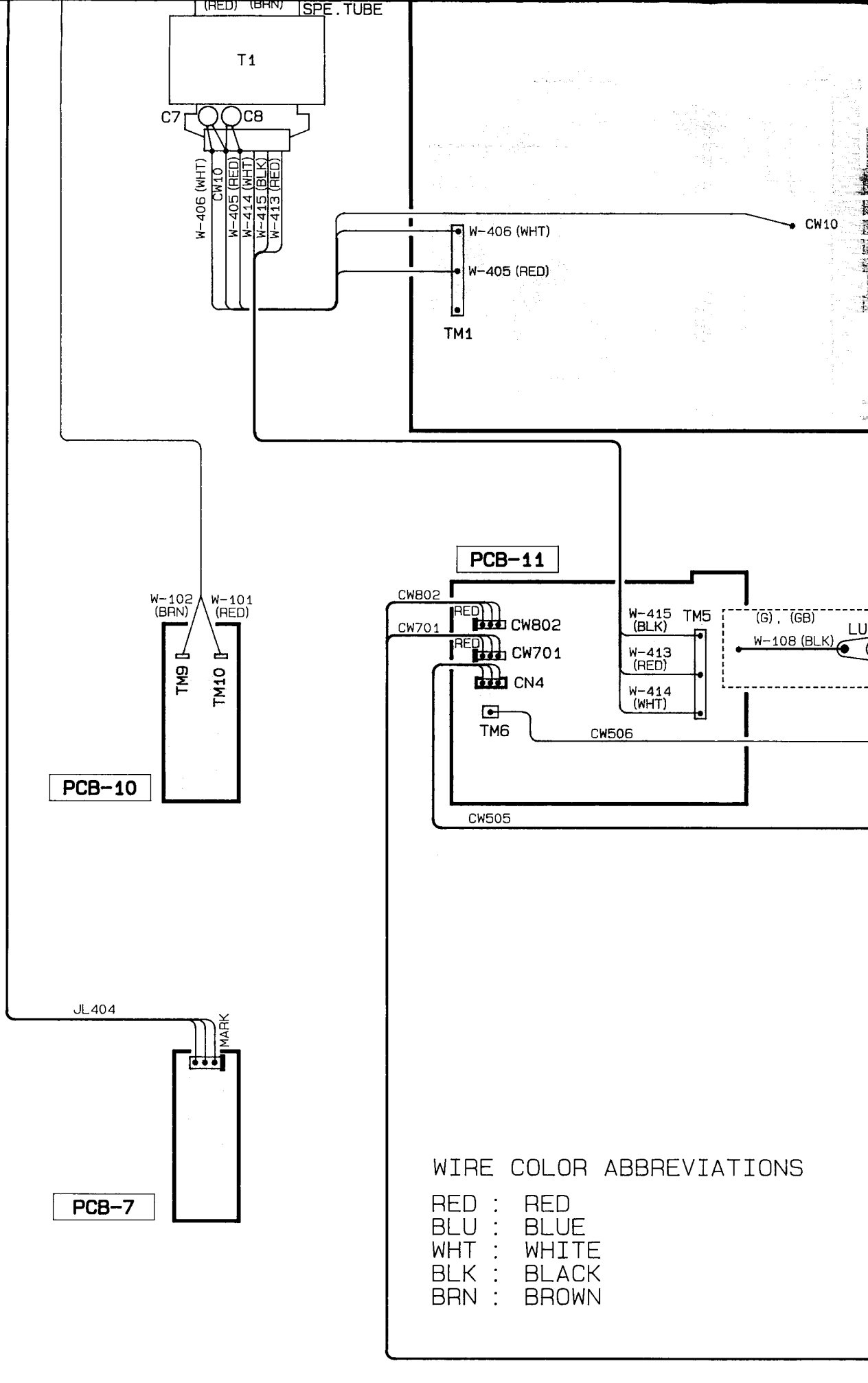
WIRING DIAGRAM

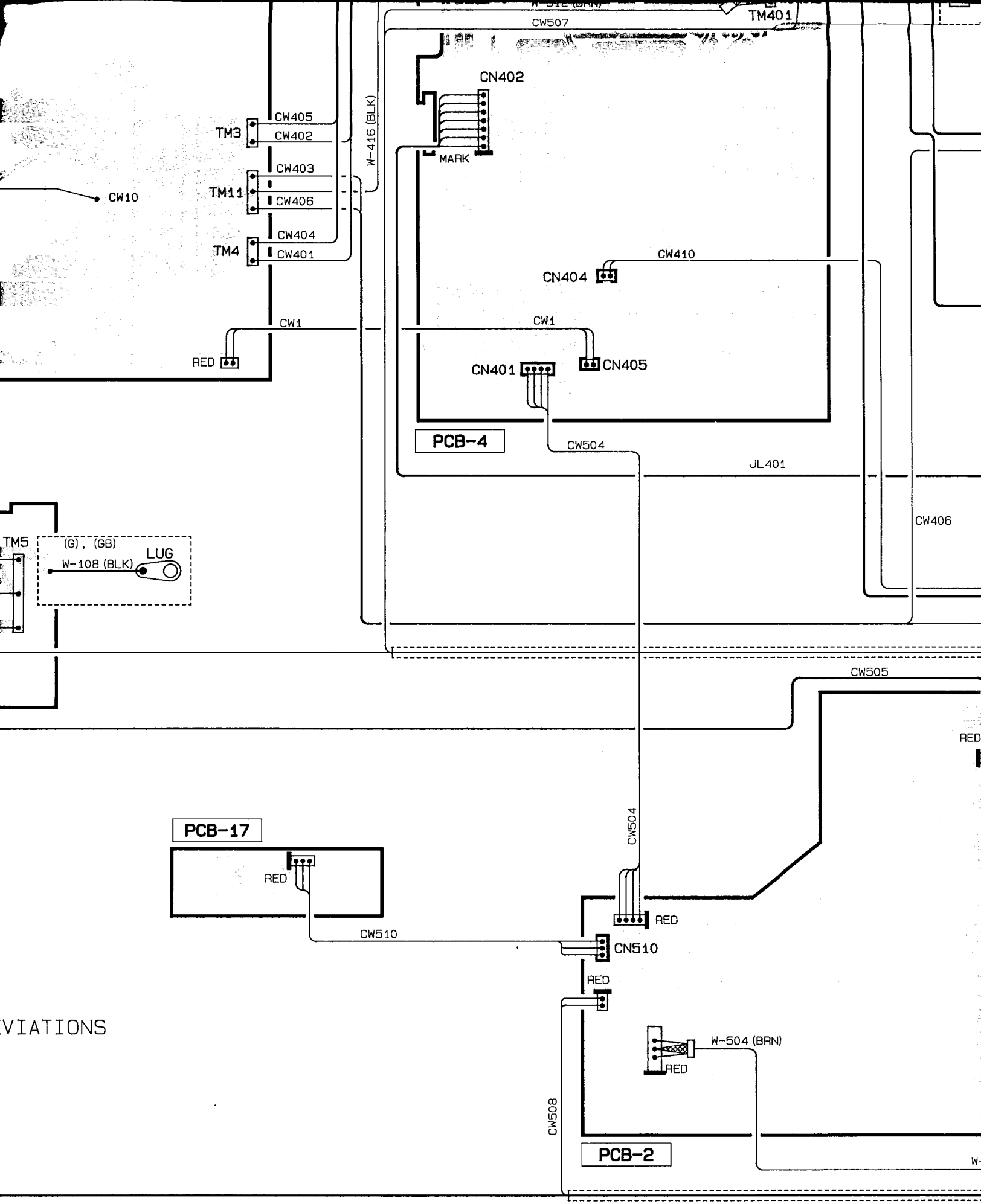



PCB-3
W-404 (BLK)
W-402 (WHT)
RED
W-805
CW80
CN2
CW802
RED
CN403
JL403
MARK
TM402
W-417
(BLK)
W-416 (BLK)
RED
W-512 (BRN)
TM401
CW507
PCB-6
CW507
CW512 GND
W-417
W-416
METAL
FITTING
CN402
MARK
CW405
TM3
CW402
CW403
TM11
CW406
CW404
TM4
CW401
W-416 (BLK)
CW410
CN404
CW1
CW1
MARK
CC401
PCB-15
PCB-5

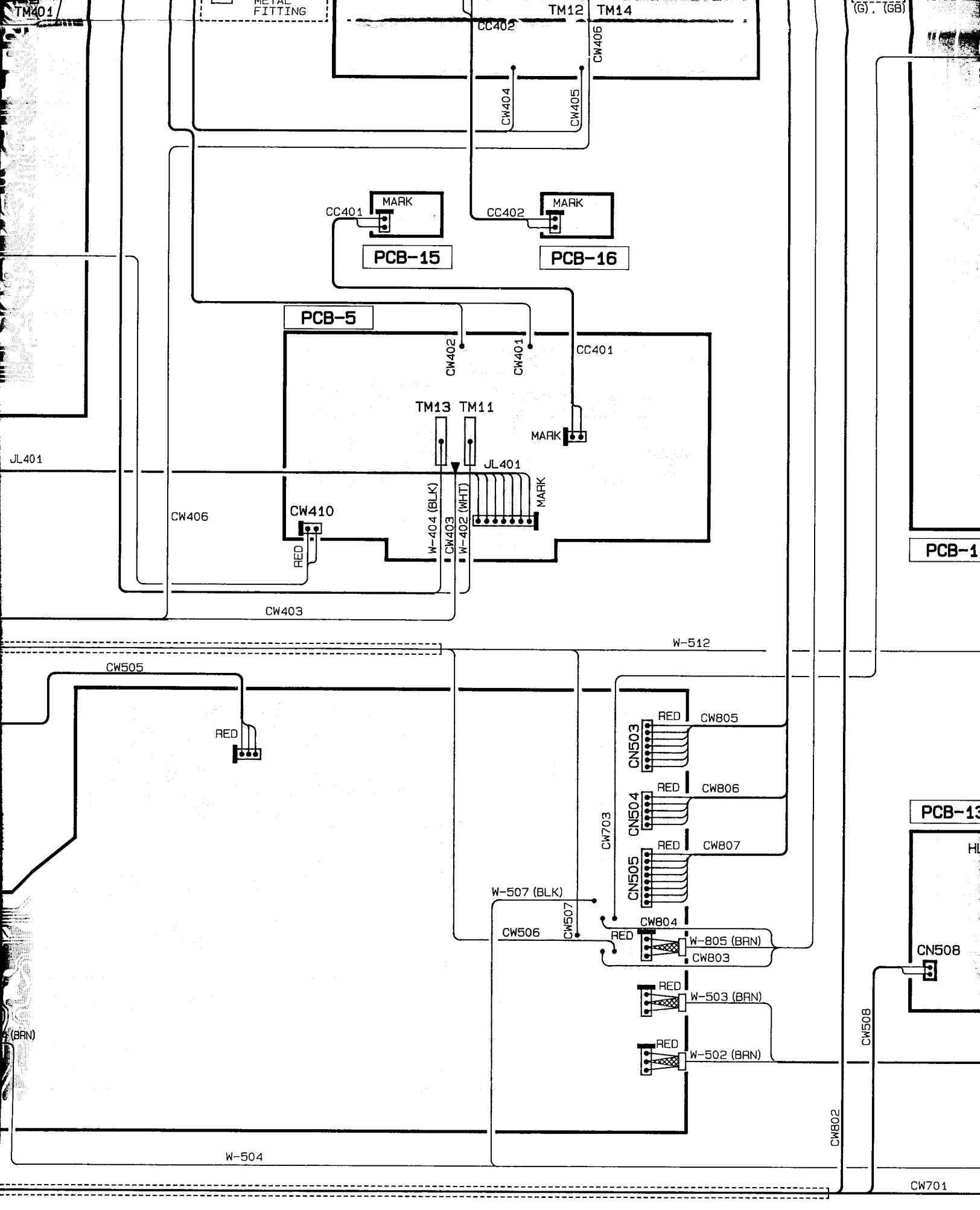

B-3
PCB-14
RED
CW804
CN502
W-805 (BRN)
RED
CW806
RED
CW807
CW805
RED
CW803
W-806 (BRN)
RED
CN2
CW802
RED
CW802
JL403
PCB-6
MARK
W-401 (RED)
W-403 (BLK)
MARK
TM12
TM14
CC402
CW406
CW404
CW405
LUG
W-107 (BLK)
(G), (GB)
CW703
W-806 (BROWN)
MARK
CC401
PCB-15
MARK
CC402
PCB-16
PCB-5
CC401

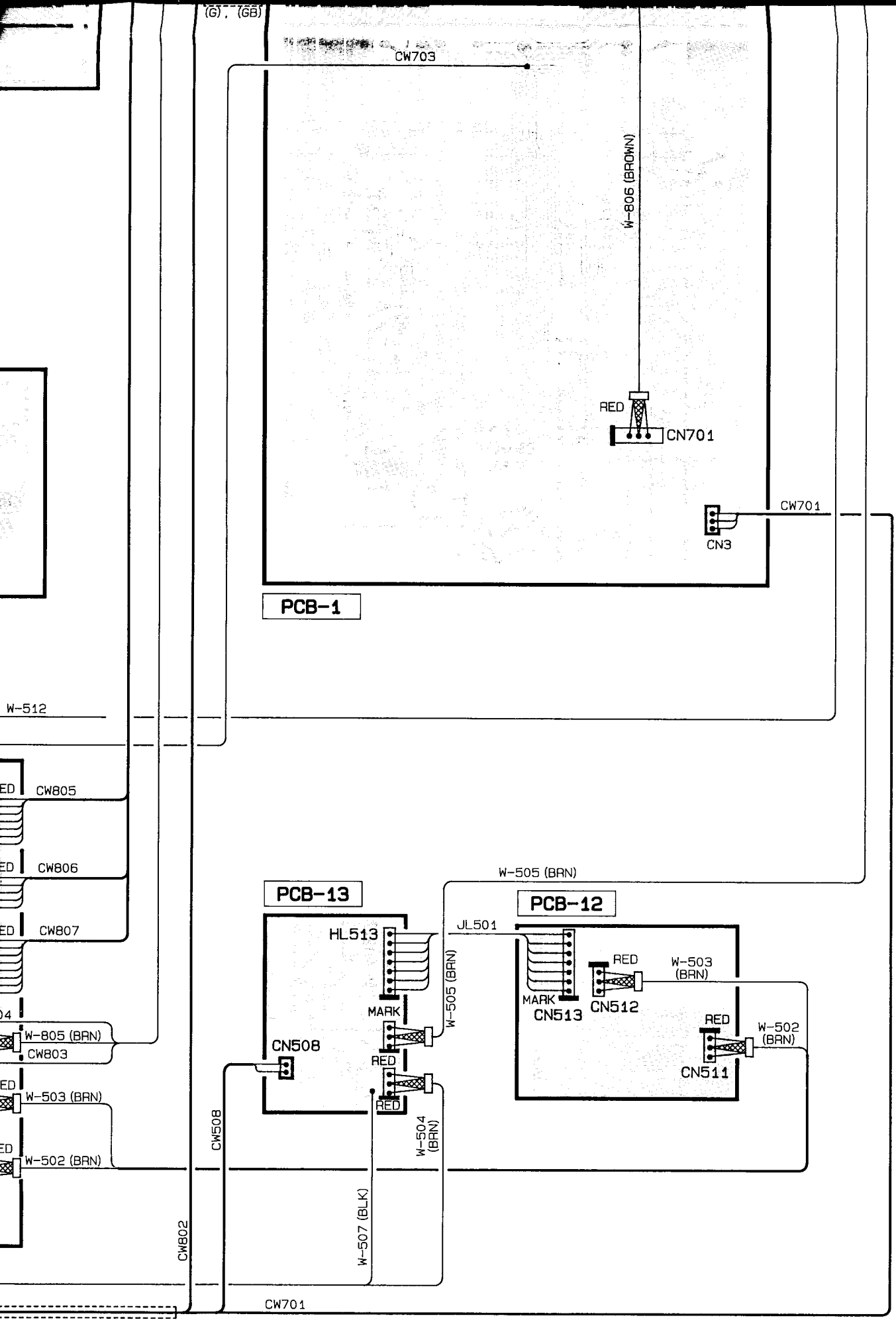

PCB-14
CN501
RED
W-512 (BRN)
RED
W-505 (BRN)
CN507
CW807
806 (BRN)
CW802
LUG
W-107 (BLK)
(G), (GB)
CW703
W-806 (BROWN)


(RED) (BRN)
SPE. TUBE
T1
C7
C8
W-406 (WHT)
CW10
W-405 (RED)
W-414 (WHT)
W-415 (BLK)
W-413 (RED)
W-406 (WHT)
W-405 (RED)
CW10
TM1
PCB-11
CW802
RED
CW802
CW701
RED
CW701
CN4
TM6
CW506
CW505
W-415 (BLK)
TM5
W-413 (RED)
W-414 (WHT)
(G), (GB)
W-108 (BLK)
W-102 (BRN)
W-101 (RED)
TM9
TM10
PCB-10
JL404
MARK
PCB-7
WIRE COLOR ABBREVIATIONS
RED : RED
BLU : BLUE
WHT : WHITE
BLK : BLACK
BRN : BROWN


TM401
CW507
CN402
MARK
W-416 (BLK)
TM3
CW405
CW402
CW403
TM11
CW406
CW404
TM4
CW401
CW10
CW410
CN404
CW1
CW1
RED
CN401
CN405
PCB-4
CW504
JL401
CW406
TM5
(G), (GB)
W-108 (BLK)
LUG
CW505
RED
PCB-17
CW504
RED
RED
CW510
CN510
RED
W-504 (BRN)
RED
CW508
PCB-2
W-

VIATIONS


TM401
METAL FITTING
TM12
TM14
CC402
CW406
CW404
CW405
CC401
MARK
CC402
MARK
PCB-15
PCB-16
PCB-5
CW402
CW401
CC401
TM13
TM11
MARK
JL401
JL401
CW406
CW410
W-404 (BLK)
CW403
W-402 (WHT)
MARK
RED
CW403
W-512
CW505
RED
RED
CW805
CN503
RED
CW806
CN504
CW703
RED
CW807
CN505
W-507 (BLK)
CW507
CW804
CW506
RED
W-805 (BRN)
CW803
RED
W-503 (BRN)
RED
W-502 (BRN)
(BRN)
W-504
CW802
(G), (GB)
PCB-1
PCB-13
CN508
CW508
CW701


(G), (GB)
CW703
W-806 (BROWN)
RED
CN701
CW701
CN3
PCB-1
W-512
CW805
CW806
CW807
W-805 (BRN)
CW803
W-503 (BRN)
W-502 (BRN)
CW802
CW508
W-507 (BLK)
W-504 (BRN)
W-505 (BRN)
PCB-13
HL513
MARK
CN508
RED
RED
W-505 (BRN)
PCB-12
JL501
MARK
CN513
RED
CN512
W-503 (BRN)
RED
CN511
W-502 (BRN)
CW701